DOCUMENT RESUME

ED 357 468 EA 024 891

TITLE	School District Administrative Costs, Regional Series, and Telecommunications. Special Study. Report to the Arizona Legislature by the Auditor General.
INSTITUTION	Arizona State Dept. of Education, Phoenix.
PUB DATE	Mar 92
NOTE	125p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Administration; *Cost Effectiveness; *Education Service Centers; Elementary Secondary Education; *Expenditure per Student; Public Schools; *School Districts; *School District Spending; School Surveys; *Telecommunications
IDENTIFIERS	*Arizona

ABSTRACT

The Arizona Office of the Auditor General conducted a study of Arizona school district administrative costs, regional services, and telecommunications. In the area of administrative costs, the study found that larger, unified districts were more cost effective in terms of district administrative costs per student and students per administrator. School-level administrative costs and the number of students per school administrator did not vary significantly among different size districts. A review of school superintendents found that most of the duties they perform are required by the state. Records maintenance and warrant processing account for up to 61 percent of total superintendent staff time. Additional services provided by superintendents vary widely among counties. Maricopa, Pima, Pinal, and Yavapai County school superintendents offer unique services. A comparison of education service agencies (ESA) in states of similar size shows they offer substantially more services to districts. It was found that ESAs are cost-effective ways of providing services to school districts. Lastly, in telecommunications, Arizona has not yet joined the national trend toward statewide educational telecommunications networks. Appendices A-G include survey scope and methodology, term definitions, state school district information, administrative organizational structures, and ESA structures and services. (Contains 76 references.) (JPT)

A STUDY OF SCHOOL DISTRICT ADMINISTRATIVE COSTS, REGIONAL SERVICES, AND TELECOMMUNICATIONS

DOUGLAS R. NORTON, CPA
AUDITOR GENERAL

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

March 23, 1992

Members of the Legislature
State of Arizona

Members of the Joint Legislative Committee
to Study Consolidation of School Districts

Transmitted herewith is a report of the Auditor General, "A Study of School District Administrative Costs, Regional Services, and Telecommunications." The study was conducted in response to a request from the Joint Legislative Committee to Study Consolidation of School Districts and with the approval of the Joint Legislative Budget Committee by resolution of November 5, 1991.

We appointed an advisory review committee, consisting of persons in the professional community interested in this study, that made recommendations concerning our planned research methodology and reviewed a draft of the report.

This report will be released to the public on Tuesday, March 24, 1992.

Should you have any questions, my staff and I would be pleased to meet with you to discuss the report.

Sincerely,

Douglas R. Norton
Auditor General

DRN/RAA/amf

cc: The Honorable J. Fife Symington, Governor
Members of the Arizona State Board of Education

2700 NORTH CENTRAL AVENUE • SUITE 700 • PHOENIX, ARIZONA 85004 • (602) 255-4385 • FAX (602) 255-1251

SUMMARY

The Office of the Auditor General has conducted a study of school district administrative costs, regional services and telecommunications. The study was conducted in response to a request from the Joint Legislative Committee to Study Consolidation of School Districts and with the approval by resolution of the Joint Legislative Budget Committee of November 5, 1991.

Certain areas discussed below may require additional study because factors affecting their implementation were not within the scope of this study. As a result, several additional areas should be studied in depth to better assess the need to restructure the public education system in Arizona and determine appropriate actions.

SCHOOL DISTRICT ADMINISTRATIVE COSTS

Larger Unified Districts Are More Cost Effective In Terms Of District Administrative Costs Per Student And Students Per District Administrator

(See pages 9 through 21)

Administrative costs were compared at the district level and the school level. The number of district and school administrators and their staffs were also compared. Arizona school districts were categorized by average daily attendance (i.e., super large, large, medium, small, and small isolated), type (i.e., unified, elementary, and high school), and location (i.e., urban and rural) to determine which district categories spent the least on administration per student and had the most students per administrator (i.e., were the most cost effective).

- Larger unified districts are more cost effective in terms of district administrative costs per student and number of students served per district administrator. Small isolated districts have the most district administrative costs per student.

Two other significant points were found in this area:

- School level administrative costs and the number of students per school administrator did not vary significantly with different size districts, except that small isolated districts had fewer students per school administrator.

- When union high school districts and their elementary districts were compared to unified districts of similar average daily attendance, unified districts had the most students per district administrator and support staff.

Administrative Costs Per Student And Students Per Administrator Do Not Differ Significantly Compared To Other States (See pages 23 through 29)

No significant difference between the percentage of total operating expenditures for administration in Arizona school districts and those of the sample states was found. District and school administrative expenditures in our sample of Arizona districts were about 12 percent of total operating expenditures. Administrative expenditures at the district level were about 5 percent, and at the school level about 7 percent of total operating expenditures. These percentages were about the same as the sample states.

The administrative costs of Arizona's school districts were compared to those of a sample of states with population growth rates similar to Arizona. Based on our sample of districts, Arizona spent an average of $183 per student on district administration, while the sample states spent an average of $190. The number of district- and school-level administrators in Arizona was then compared to those of the sample states and nationally. Arizona's average number of students per district administrator was 532; the national average was 526. Arizona had a ratio of 381 students per school administrator, which was higher than the sample states' ratio of 307 and the national ratio of 292.

District Administrative Expenditures Increased At About The Same Rate As Expenditures For Instruction Over The Past Decade (See page 34)

From fiscal year 1981-82 through 1989-90, expenditures for both instruction and district administration increased 125 percent in Arizona. However, this rate of increase was almost four times greater than the increase in the Consumer Price Index during the same time period. Two primary reasons for such a substantial increase in administrative and instructional costs are increases in the number of students and increases in salaries. Another

studies regarding telecommunications in Arizona. Entities such as AETC have actively promoted the use of telecommunications throughout the State. We believe these efforts should be increased and that ESAs would help facilitate this process.

TABLE OF CONTENTS

TABLE OF CONTENTS (CONCL'D)

LIST OF TABLES

LIST OF TABLES (CONCL'D)

LIST OF CHARTS

LIST OF CHARTS (CONCL'D)

LIST OF MAPS

INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a special study of school district administrative costs, regional services and telecommunications in Arizona and across the nation. The study was requested by the Joint Legislative Committee to Study Consolidation of School Districts and approved by resolution of the Joint Legislative Budget Committee of November 5, 1991.

GENERAL SCOPE AND METHODOLOGY

The study comprised two diverse areas. The first area consisted of collecting and analyzing data on the number of school district administrators and administrative costs. The second area consisted of collecting and analyzing information about regional services and telecommunications technology provided to school districts in Arizona and across the nation, as well as the functions of Arizona county school superintendents.

The Joint Legislative Committee to Study Consolidation of School Districts set out seven tasks for our review:

1. Determine the actual number of administrators, including support staff, per district categorized by district- and school-level administrators and the resulting per student ratios for all Arizona districts.

2. Using the data collected above, determine variations among super large, large, medium, small, and small isolated districts; among unified, elementary, and high school districts; and between rural and urban districts. Also determine "typical" organizational patterns and the reasons for variations from these patterns.

3. Through on-site interviews with and analysis of 30 sample districts that represented "typical" patterns, determine these districts' actual administrative costs and how well their current administrative organizational structures represented cost-effective patterns.

4. Compare Arizona's administrative ratios and costs with those of other states.

5. Develop recommendations on how Arizona's current recordkeeping system could be modified to provide better, more comparable data on school district administrative costs in the future.

6. Review the functions of the county school superintendents' offices in relation to the services they provide for the educational system (e.g., accounting, small school services, special education services), and recommend how these functions could be modified to provide more cost-effective services.

7. Review whether regional services and technology in relation to school district management and personnel training functions have resulted in more cost-effective educational systems across the nation and in Arizona, and recommend a structure for these within Arizona.

A section of other topics we believe should be studied in greater detail is included in the Areas For Further Study section of this report (see page 73).

School District Administrative Costs

The area of the study that dealt with school district administrative costs consisted of data collection and analysis phases. The first and most essential step was to define the terms to be used.

A database was established from the information collected from the Arizona Department of Education on each district. Data was collected from fiscal year 1989-90, the most recent year information could be compared nationally. All districts were divided into categories based on student population (i.e., super large, large, medium, small, or small isolated), type (i.e., unified, elementary, or high school), and location (i.e., urban or rural). The ratio of pupils to administrators was then calculated for each district. Thirty sample districts were selected based on the average

number of students per administrator in each category. Through on-site visits, we collected administrative cost data and other information from each of the 30 districts or their county school superintendents. Data collected about the number of administrators and administrative costs was then analyzed and variations were determined among the various categories of districts.

Information was also collected about the number of administrators nationally and administrative costs in other states with a population growth pattern similar to Arizona. This data was then analyzed and compared with Arizona data.

Problems with the data collection of administrative costs from the sample districts were also analyzed and recommendations to improve the State's school district recordkeeping system were developed.

Regional Services and Telecommunications

The second area of the study addressed regional services and telecommunications technology in Arizona and across the nation, and the functions of Arizona county school superintendents.

Arizona Revised Statutes and the Uniform Accounting Manual for Arizona County School Superintendents were reviewed to obtain information about the functions of county school superintendents.

Information about other regional service providers and telecommunications technology in Arizona was obtained from a questionnaire mailed to county school superintendents and school districts. Based on their responses to the questionnaire, we contacted other regional service providers in Arizona to obtain information on the types of services and technology they are providing to districts in Arizona.

A sample of 14 states was selected to obtain information on regional services and telecommunications technology across the nation. We contacted the state department of education and education service agencies

in each state and obtained information about their structure, operation, the services they provide to their member school districts, and cost savings.

Advisory Review Committee

The Auditor General established an advisory review committee of ten members with either expertise in school finance and administration or in the operations of county school superintendents' offices. The committee represented school district governing boards, county school superintendents, the Arizona Department of Education, taxpayers, and school district administrators from districts of various types and sizes, including a small isolated rural district. The committee consisted of the following members:

Dr. Louann Bierlein	Assistant Director, Morrison Institute for Public Policy, Arizona State University
Ms. Starr Burks	Director of Business Services, Murphy Elementary School District
Ms. Sandra Dowling	County School Superintendent, Maricopa County
Mr. Eugene Dudo	Assistant Superintendent for Finance, Glendale Union High School District
Dr. Charles Essigs	Assistant Superintendent/Business Services, Mesa Unified School District
Dr. Mary Lou Gammon	Superintendent, Bonita Elementary School District
Mr. Kevin McCarthy	Executive Director, Arizona Tax Research Association
Dr. Judy Richardson	Administrator for School Finance, Career Ladders, and Legislative Services, Arizona Department of Education
Dr. Paul Street	County School Superintendent, Yavapai County
Ms. Marilyn Wilson	Board Member, Mesa Unified School District; President, Arizona School Boards Association

The advisory review committee was formed to provide input from the professional community interested in the study, and comments and suggestions on the preliminary draft of our findings and recommendations.

Acknowledgments

The Auditor General expresses appreciation to the officials and staffs of the school districts, county school superintendents' offices, the Arizona Department of Education, the National Center for Education Statistics of the U.S. Department of Education, and the advisory review committee and others who assisted in this study.

SCHOOL DISTRICT ADMINISTRATIVE COSTS

CHAPTER 1

COMPARISONS OF ADMINISTRATIVE COSTS AMONG ARIZONA'S SCHOOL DISTRICTS

The Auditor General conducted a study of school district administrators and administrative costs in Arizona and concluded the following questions were relevant.

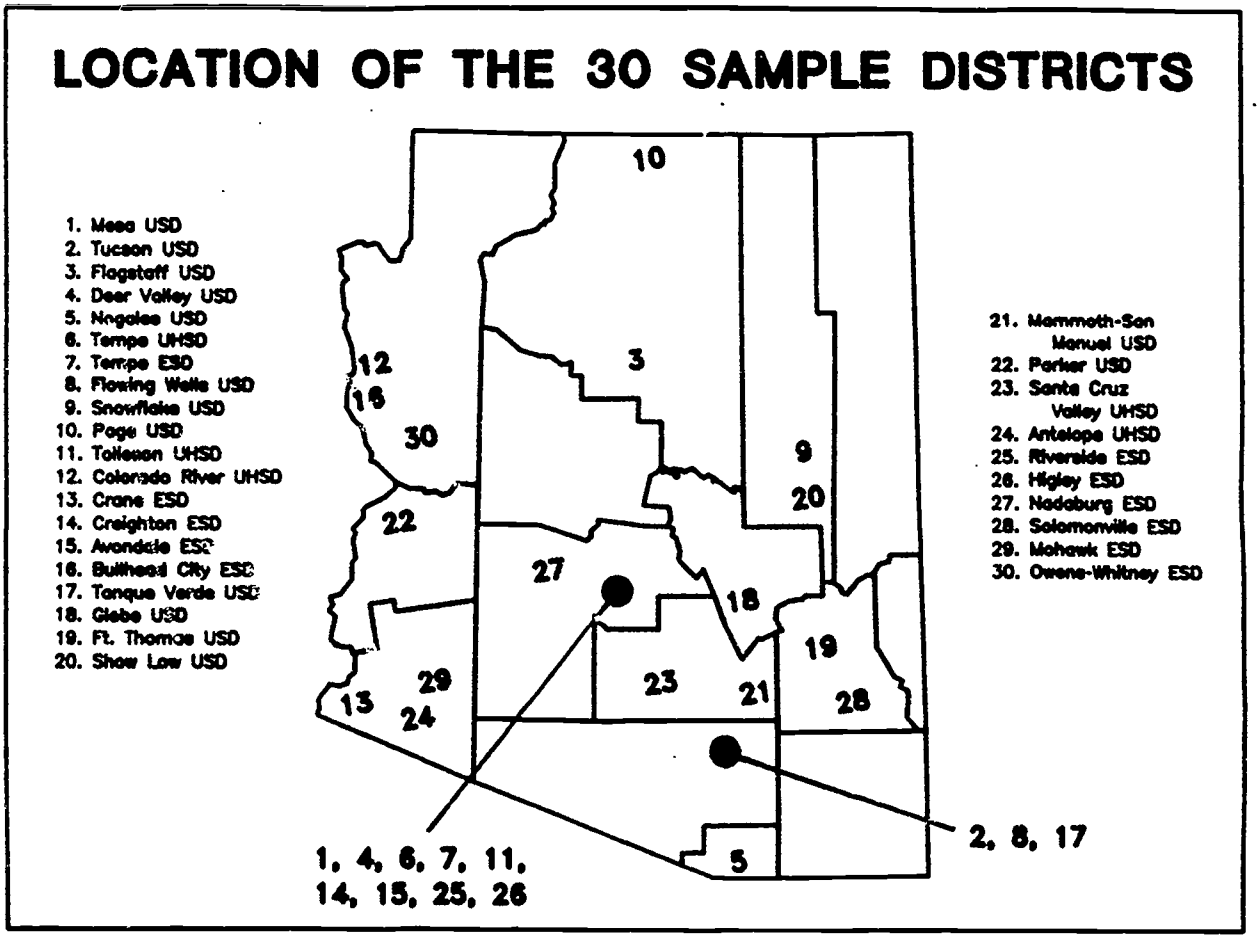
- **Do smaller districts spend more on administration per student than larger districts? What is the most cost effective student population for a district?**
- **Are administrative costs less in unified districts than in elementary or high school districts?**
- **Does administrative spending differ between urban and rural districts?**
- **Do union high school districts and their feeder elementary districts have fewer students per administrator than similar unified districts?**

District administrative costs consist primarily of the costs of operating the offices of district superintendents, associate superintendents, and business managers; while school administrative costs consist generally of the costs of operating principals' offices. U.S. Department of Education definitions were used so our data was comparable with national figures. To determine the number of administrators and the per student ratios to identify sample districts, data was collected for the 213 Arizona school districts that have administrators. (See Map 2 on page 11 for composition of school districts in each county.) To determine administrative costs, data was collected from 30 sample districts. (See Map 1 on page 10.) In our analysis, a distinction was made between district-level and school-level administrators and administrative costs. (For more detailed information about the scope and methodology of school district administrative costs and definitions used, see Appendices A and B.)

FINDINGS AND ANALYSES

The number of administrators and administrative costs were analyzed to determine variations among the different sizes and types of districts, and between urban and rural districts. Administrative organizational patterns of school districts were also determined.

MAP 1

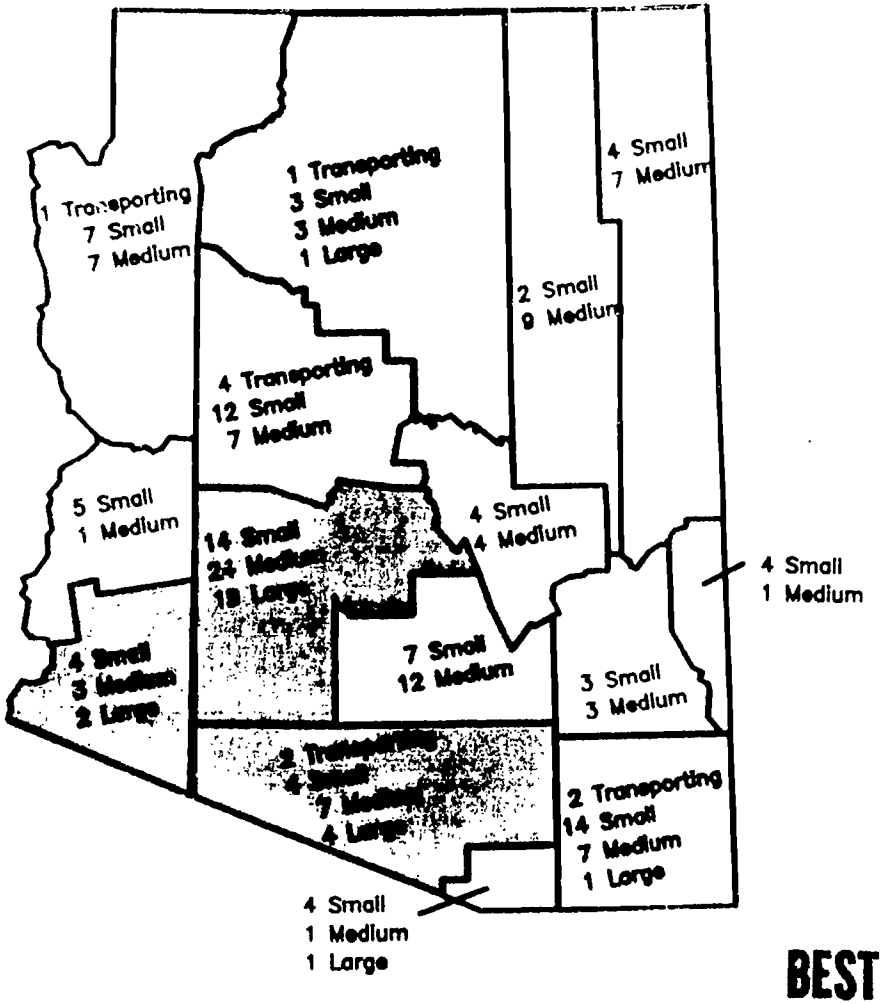


Larger Districts Have Lower Administrative Costs Per Student

For our analysis based on average daily attendance, districts were divided into five categories according to student population: super large (over 40,000), large (5,000 to 40,000), medium (under 5,000 but not small), and small and small isolated (under 600 in either elementary or high school grades).

In our analysis of the administrative costs of the 30 sample districts, district administrative costs per student vary with district size and smaller districts are less cost effective. However, even though our analysis indicated that the average student population of small isolated districts is larger than small districts, small isolated districts have higher administrative costs per student. (See Chart 1 on page 13.) School administrative costs do not vary as much with average daily attendance as district administrative costs.

COMPOSITION OF SCHOOL DISTRICTS IN EACH COUNTY



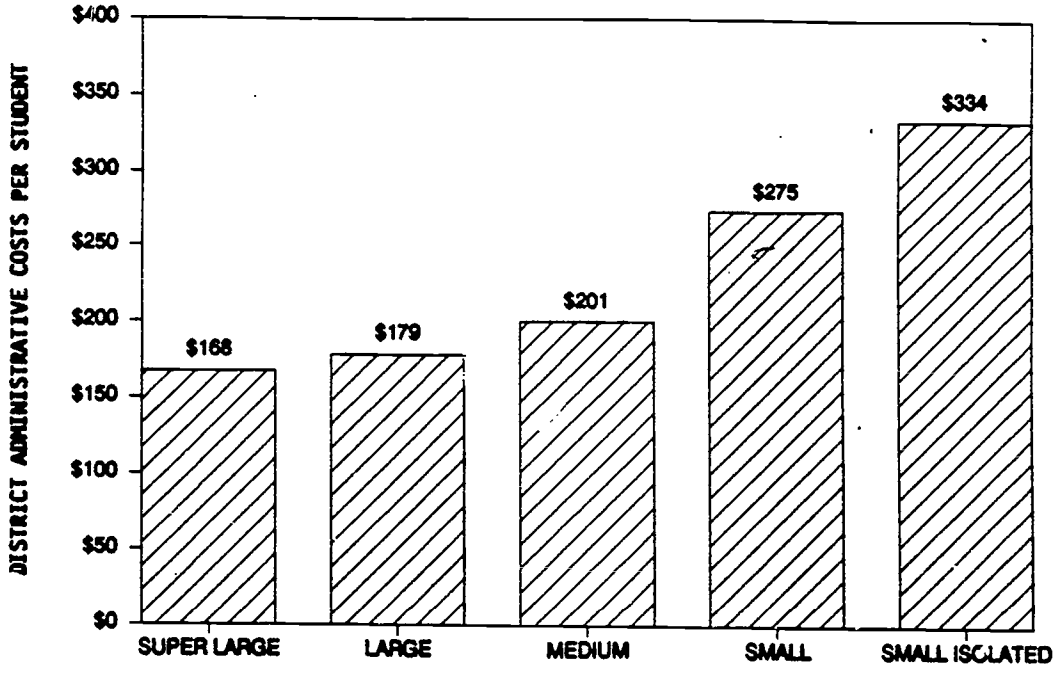
100% Rural
85% - 99% Rural
50% - 84% Rural
Less than 50% Rural

MAP 2

Note: Small, Medium, and Large categories are based on average daily membership for 1990-91.

CHART 1

DISTRICT ADMINISTRATIVE COSTS PER STUDENT BY DISTRICT SIZE FISCAL YEAR 1989-90



Source: Compiled from data of the 30 sample districts

A.R.S. §15-901.B.23 defines a small isolated district as any school dist ict with less than 600 students in either high school or elementary grades, but all schools in the district are located 30 miles or more from another school or, if road conditions and terrain make driving slow or hazardous, 15 miles or more from another school with the same grades in another district. In selecting our 30 sample school districts, we noted several districts classified as small isolated districts under this definition that are not located in remote areas. For example, both Wickenburg and St. Johns Unified School Districts are classified as small isolated districts and, therefore, receive additional funding in accordance with this statute. However, both districts are located within the city or town limits.

Therefore, the definition of a small isolated school district in A.R.S. §15-901.B.23 should be reviewed to ascertain whether this definition should be modified and, if so, to determine a new definition.

Our analysis also showed that the number of students per district administrator and support staff decreases as the size of the district decreases from super large to small isolated. (See Chart 2.)

Economy of scale is the apparent reason larger districts are more economical in terms of the number of students per district administrator than smaller districts. A minimum number of administrators is necessary to manage a district of any size. However, as the size of a district increases, so does the number of students per district administrator.

Chart 3 shows that all size categories of districts have similar ratios of students per school administrator, except for small isolated districts, which have significantly fewer students per school administrator.

There Is A Direct Correlation Between The Size Of A School District And The Complexity Of Its Administrative Organizational Structure

Our study of the organizational structure of the 30 sample districts showed the following general characteristics.

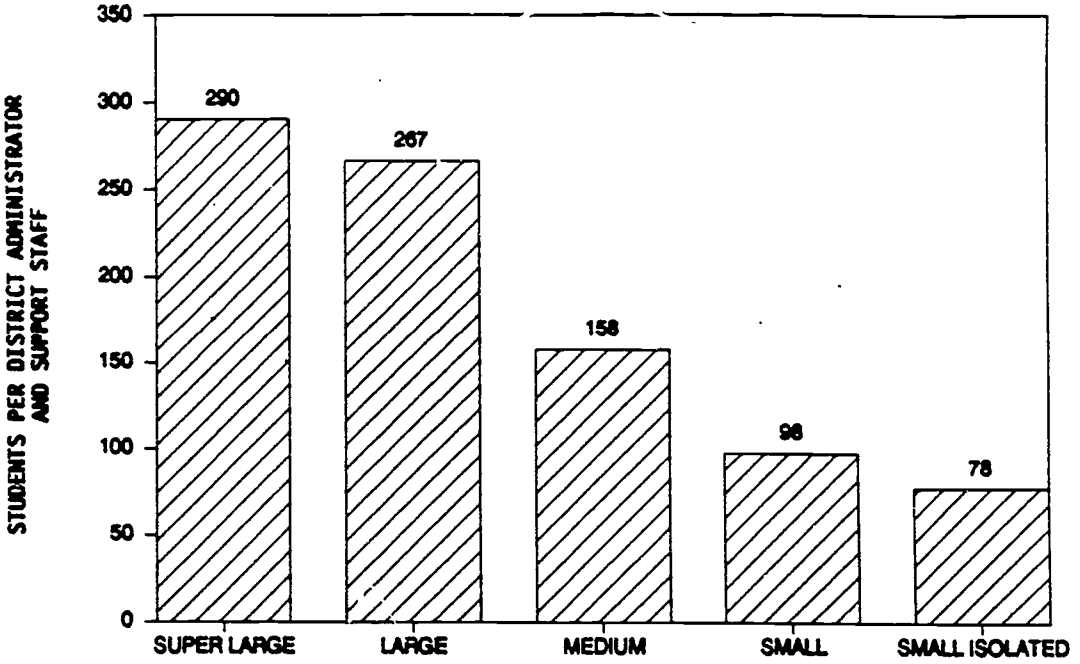
- In the smallest of school districts, administrators are more likely to perform more than one function.
- In medium school districts, district administration will generally include one or more assistant superintendents.
- Large districts usually have three or more assistant superintendents.
- Super large districts have a deputy superintendent supervising six or more assistant superintendents.

Appendix E includes sample organizational structures.

According to School Finance and Education Policy, Enhancing Educational Efficiency, Equality and Choice, studies concerning the cost-size relationship among different school districts indicate that "per-pupil costs are generally higher in small school districts than in average-size districts" because larger school districts have "significant economies of scale". However, the article also points out that studies indicate very large districts have "significant diseconomies of scale" (Guthrie). Some

CHART 2

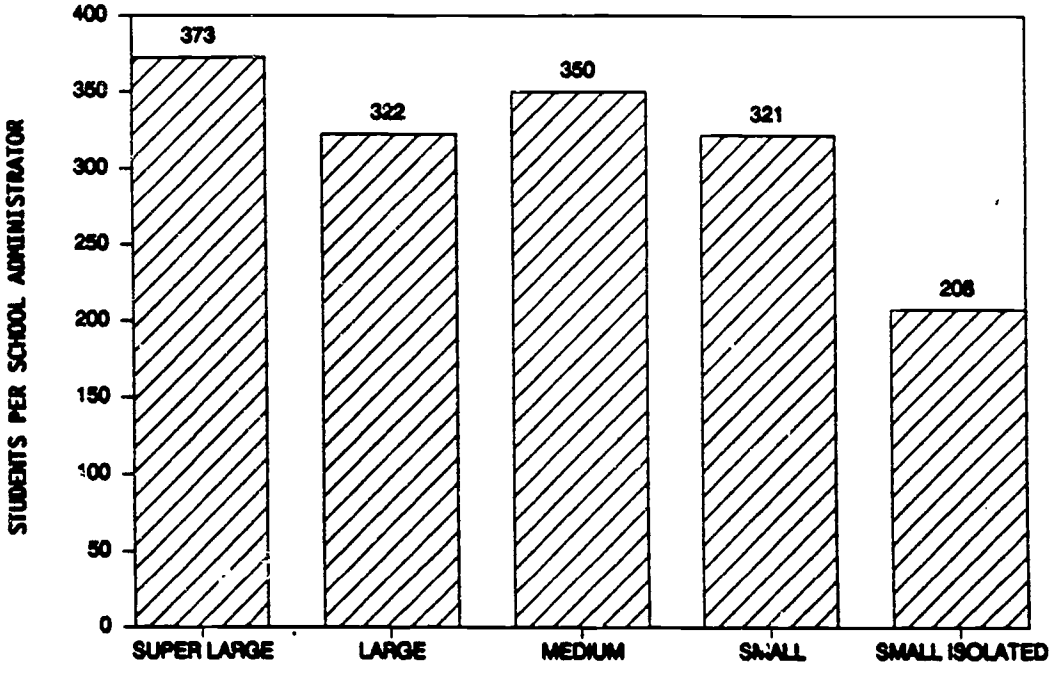
STUDENTS PER DISTRICT ADMINISTRATOR AND SUPPORT STAFF BY DISTRICT SIZE FISCAL YEAR 1989-90



Source: Compiled from Arizona Department of Education data for 213 districts

CHART 3

STUDENTS PER SCHOOL ADMINISTRATOR BY DISTRICT SIZE FISCAL YEAR 1989-90



Source: Compiled from Arizona Department of Education data for 213 districts

evidence of diseconomies of scale was found when numbers of students per district administrator without consideration of their support staffs were analyzed. Large districts had 649 students per district administrator while super large districts had only 590 students per district administrator.

Unified Districts Have The Lowest Administrative Costs Per Student

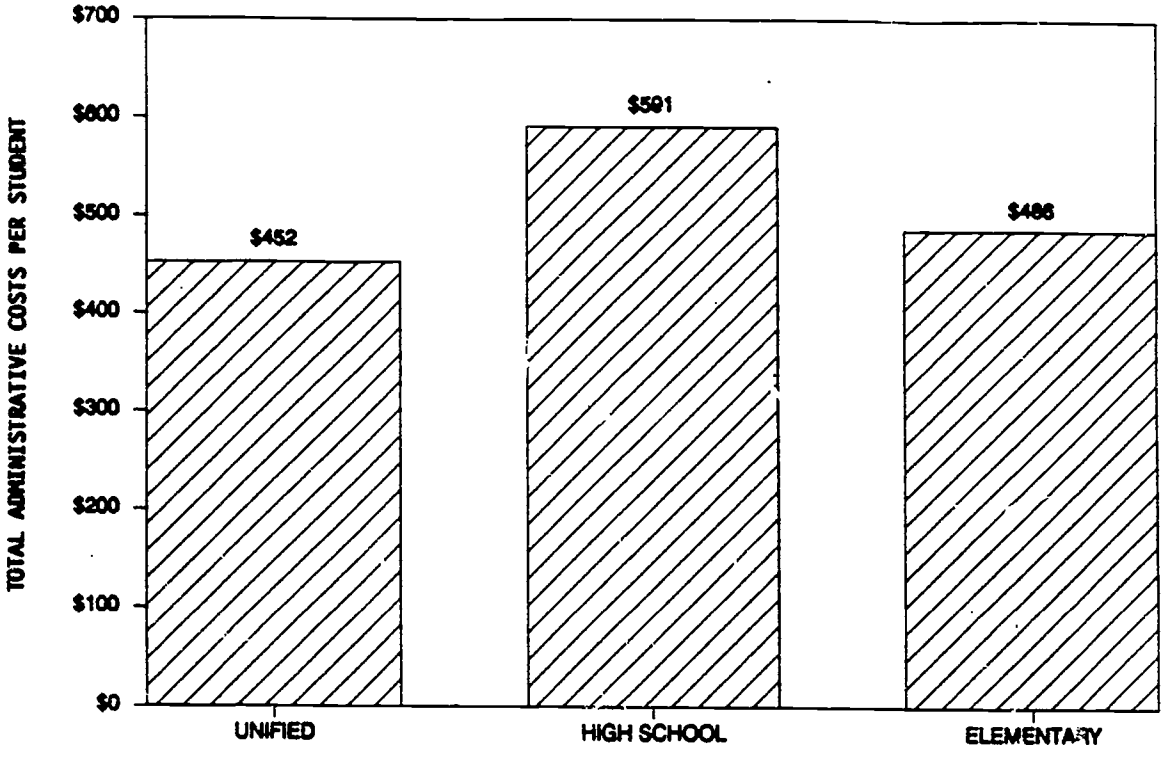
Our analysis of districts by type (unified, high school, and elementary) found that the number of students per district administrator and support staff is the highest for unified districts and the lowest for high school districts.

Our comparison of the administrative costs of the 30 sample districts found that unified districts have the lowest district and total administrative costs per student. High school districts have significantly higher district and school administrative costs per student. As shown in Chart 4, the high school districts' administrative costs are considerably higher than those of unified and elementary districts.

To understand why high school districts have significantly higher administrative costs per student and fewer students per administrator and support staff, a small sample of high school districts was surveyed. We determined what programs, if any, were unique to high school districts and what additional administrative costs were incurred as a result of those programs. Based on the survey, both high school and unified districts offer similar programs and incur administrative costs usually not found in elementary districts, such as vocational education programs; athletic programs; pregnant teen programs; and bookstore, student activities, newspaper, yearbook, and advanced placement. Many of these programs and activities incur additional administrative expenses (i.e., salaries for the director, coordinator, or assistant principal). Additional administrative expenses are also incurred for attendance, discipline, security, and scheduling classes in both high school and unified districts.

CHART 4

TOTAL ADMINISTRATIVE COSTS PER STUDENT BY DISTRICT TYPE FISCAL YEAR 1989-90



Source: Compiled from data of the 30 sample districts

If these were the only factors involved, it would seem logical that elementary districts should have the lowest administrative costs per student. However, another factor that must be considered is district size. In our sample, unified districts were on the average larger than elementary and high school districts. The average size of elementary and high school districts was about the same in our sample.

The organizational charts of the 30 sample school districts were also analyzed to determine whether the complexity of the administrative organizational structure was affected by the type of district (i.e., whether type resulted in certain functions being staffed with separate administrators). However, any correlation between the type of district and the complexity of the administrative organizational structure was not found.

Urban Districts Have Lower Administrative Costs Per Student Than Rural Districts Because Urban Districts Generally Have More Students

Our comparison of urban and rural districts found that urban districts have significantly lower district and school administrative costs per student than rural districts. Rural districts had district administrative costs that were 26 percent higher than urban districts, and school administrative costs that were 5.3 percent higher than urban districts. The importance of this analysis can be seen when the makeup of the districts in the two categories is considered. Urban districts generally have a larger student population than rural districts and would therefore be able to take advantage of the economies of scale. Urban districts may also benefit from a larger, more convenient, and more competitive supply of goods and services, allowing them to obtain needed goods and services at lower prices. By contrast, rural districts have a predominantly small student population and are often isolated; however, they still incur certain minimum administrative costs to operate.

The organizational charts of the 30 sample school districts were also analyzed to determine whether the complexity of the administrative organizational structure was affected by district location (i.e., whether location resulted in certain functions being staffed with separate administrators). However, any correlation between the location of the sample districts and the complexity of their administrative organizational structure was not found.

Unified Districts Have More Students Per Administrator When Compared To Union High School Districts And Their Feeder Elementary Districts

The ratios of students per district administrator and support staff of union high school districts and their feeder elementary districts were compared to the average of all unified districts of comparable size. The purpose of this comparison was to determine whether the unification of a union high school district with its feeder elementary districts may possibly result in fewer district administrators and support staff.

Table 1 shows that in all cases, unified districts of comparable size had more students per district administrator and support staff than the union high school districts and their feeder elementary districts. Unified district ratios were an average of 38 percent higher for all size districts than union high school districts and their feeder elementary districts. However, decisions to consolidate should not be based solely on this analysis because many other factors are involved.

TABLE 1

UNIFIED DISTRICTS COMPARED TO UNION HIGH SCHOOL DISTRICTS AND THEIR FEEDER ELEMENTARY DISTRICTS

	STUDENTS PER DISTRICT ADMINISTRATOR AND SUPPORT STAFF
AVERAGE OF ALL SUPER LARGE, UNIFIED, URBAN DISTRICTS	290
PHOENIX UNION HIGH SCHOOL DISTRICT AND 13 FEEDER ELEMENTARY DISTRICTS	132
GLENDALE UNION HIGH SCHOOL DISTRICT AND 2 FEEDER ELEMENTARY DISTRICTS	253
AVERAGE OF ALL LARGE, UNIFIED, URBAN DISTRICTS	307
TEMPE UNION HIGH SCHOOL DISTRICT AND 2 FEEDER ELEMENTARY DISTRICTS	184
YUMA UNION HIGH SCHOOL DISTRICT AND 5 FEEDER ELEMENTARY DISTRICTS	177
TOLLESON UNION HIGH SCHOOL DISTRICT AND 5 FEEDER ELEMENTARY DISTRICTS	119
AVERAGE OF ALL LARGE, UNIFIED, RURAL DISTRICTS	206
CASA GRANDE UNION HIGH SCHOOL DISTRICT AND 4 FEEDER ELEMENTARY DISTRICTS	115
AGUA FRIA UNION HIGH SCHOOL DISTRICT AND 2 FEEDER ELEMENTARY DISTRICTS	126
AVERAGE OF ALL MEDIUM, UNIFIED, RURAL DISTRICTS	174
BUCKEYE UNION HIGH SCHOOL DISTRICT AND 4 FEEDER ELEMENTARY DISTRICTS	105
AVERAGE OF ALL SMALL, UNIFIED, RURAL DISTRICTS[1]	126
AVERAGE OF ALL SMALL, ISOLATED, UNIFIED, RURAL DISTRICTS[1]	101
SANTA CRUZ VALLEY UNION HIGH SCHOOL DISTRICT AND 3 FEEDER ELEMENTARY DISTRICTS	95
PATAGONIA UNION HIGH SCHOOL DISTRICT AND 2 FEEDER ELEMENTARY DISTRICTS	48
VALLEY UNION HIGH SCHOOL DISTRICT AND 3 FEEDER ELEMENTARY DISTRICTS	62
ANTELOPE UNION HIGH SCHOOL AND 3 FEEDER ELEMENTARY DISTRICTS	77
BICENTENNIAL UNION HIGH SCHOOL DISTRICT AND 4 FEEDER ELEMENTARY DISTRICTS	54

[1]Small rural and small isolated rural districts were analyzed together because small union high school districts and their feeder elementary districts are a mixture of both categories.

Source: Compiled from Arizona Department of Education data for 213 districts.

Instructional Costs Per Dollar Of Administration Do Not Vary Significantly With District Size

To determine the relationship between instructional and administrative costs as the size of a district increases, the 30 sample districts were categorized by size. The total instructional costs of the districts in each size category were added and then this figure was divided by the total administrative costs of all districts in the same category. The resulting amount represents the number of dollars spent on instruction for every dollar spent on administration. Our analysis indicates there appears to be no clear correlation between district size and instructional costs per dollar of administration.

However, for each administrative dollar spent, the super large and large districts in our sample spent a little more for instruction than medium, small, and small isolated districts.

Districts With High Assessed Valuations And High Student Standard Test Scores Do Not Necessarily Have High Administrative Costs

Administrative costs were compared to assessed valuation to determine whether districts with high assessed valuations had higher administrative costs Administrative costs were also examined to determine their effect, if an , on the standard test scores of district students.

The results of our comparisons indicate there appears to be no relation between administrative costs and assessed valuation, and administrative costs and standard test scores.

CONCLUSIONS AND RECOMMENDATION

Our review of administrative costs and the number of administrators among Arizona school districts revealed the following:

- Larger-size districts are more cost effective in terms of district administrative costs per student and number of students per district administrator. Small isolated districts are the least cost effective.

- School-level administrative costs per student and the number of students per school administrator do not vary significantly with different size districts, except that small isolated districts have significantly fewer students per school administrator.

- High school districts have higher total administrative costs per student than unified and elementary districts. Unified districts are the most cost effective.

- Unified districts have more students per district administrator and support staff than union high school districts and their feeder elementary districts functioning as separate districts.

A recommendation from our study is that:

- The statutory definition of a small isolated school district should be reviewed.

CHAPTER 2

COMPARISONS OF ADMINISTRATIVE COSTS OF ARIZONA'S SCHOOL DISTRICTS TO OTHER STATES

In comparing Arizona's administrative staffing and costs to those of other states and nationally, the following questions were addressed:

- What percentage of Arizona's total operating expenditures is spent on administration, and how does this percentage compare with other similar states?
- Does Arizona spend more on administration per student than other similar states?
- Does Arizona have more administrators per student than other states or when compared nationally?
- Does Arizona have more school districts or more small school districts compared to other states with a similar population growth rate?

Our analysis of numbers of administrators of Arizona's school districts to other states included comparisons with the national average. Our analysis of administrative costs in Arizona to other states included comparisons with eight sample states with a high population growth rate like Arizona. See Appendix A for additional information on the scope of these comparisons and methodology.

FINDINGS AND ANALYSES

Arizona's District Administrative Costs Per Student Are Lower Than Most States Sampled

Arizona spent less on district administration per student than most states in our sample. However, Utah spent significantly less per student on administration than any state selected for comparison. (See Chart 5, page 24.)

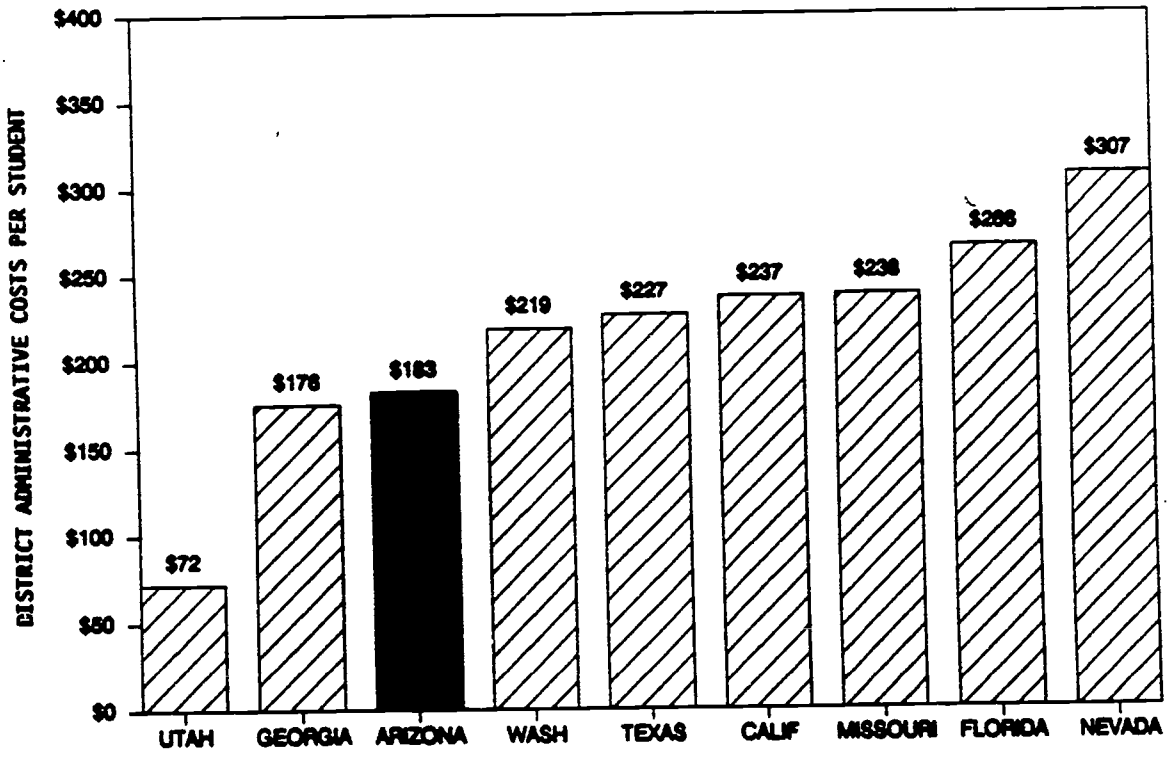
Also, when the ratio of students to administrators in Arizona was compared with those of other states, Arizona had a slightly higher ratio of students per district administrator than the national average, but a lower ratio

than the sample states. However, Arizona's ratio of students per school administrator was higher than the national average and all states sampled, except Utah. (See Charts 6 and 7.)

We discussed the reason for Utah's low administrative costs with the Utah Department of Education and the National Center for Education Statistics. Both replied that Utah has relatively few districts, most of which are large- and medium-size districts; Arizona has numerous very small districts. As a result, Utah is able to operate with fewer administrators per student. However, we also found that some states with considerably fewer districts than Arizona, such as Florida and Nevada, have higher administrative costs per student.

CHART 5

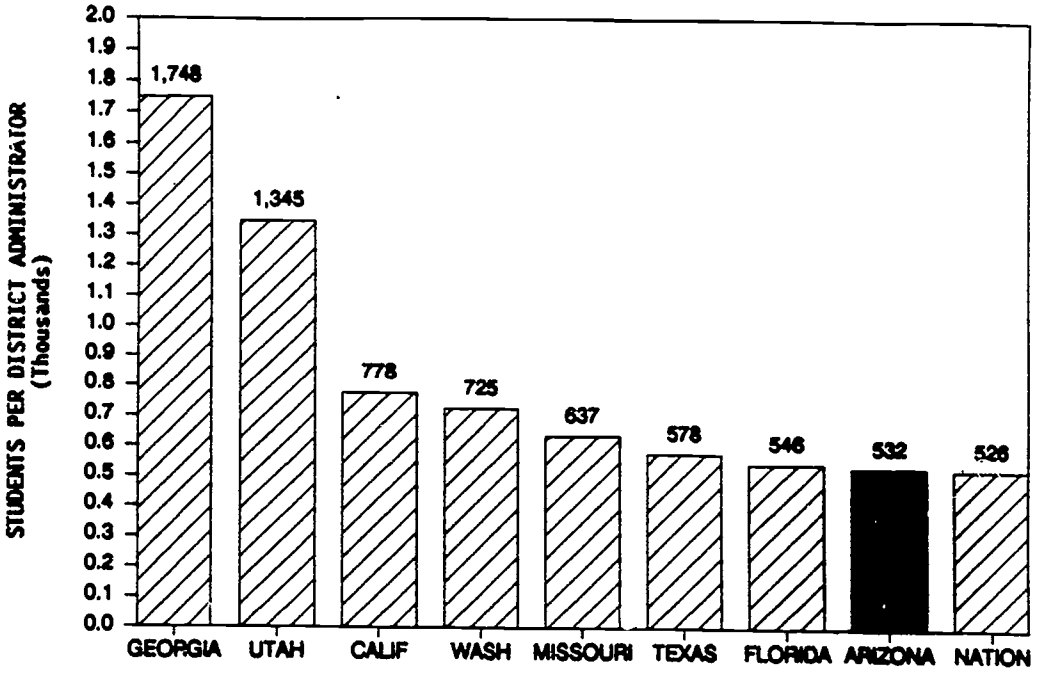
DISTRICT ADMINISTRATIVE COSTS PER STUDENT
ARIZONA AND SAMPLE STATES
FISCAL YEAR 1989-90



Source: Compiled from data provided by the Arizona Department of Education and the sample states

CHART 6

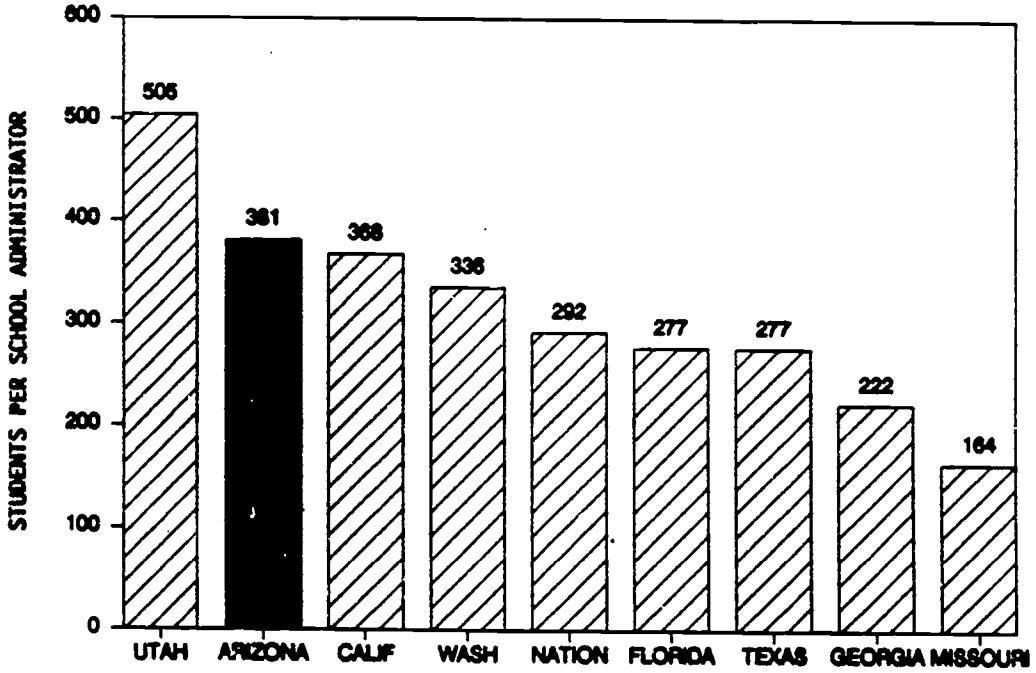
STUDENTS PER DISTRICT ADMINISTRATOR ARIZONA, SAMPLE STATES, AND NATION FISCAL YEAR 1989-90



Source: Compiled from data provided by the Arizona Department of Education and the National Center for Education Statistics. (Nevada was excluded because it reported certified administrators only.)

CHART 7

STUDENTS PER SCHOOL ADMINISTRATOR ARIZONA, SAMPLE STATES, AND NATION FISCAL YEAR 1989-90



Source: Compiled from data provided by the Arizona Department of Education and the National Center for Education Statistics. (Nevada was excluded because it reported certified administrators only.)

Arizona Districts Have A Similar Percentage Of Administrators As Other States

In fiscal year 1989-90, Arizona's proportion of district and school administrators and support staffs to total employees was comparable to the average of the selected states, but slightly higher than the national average. Administrators and support staff averaged 12.8 percent of total employees in Arizona, while in the sample states the average was 12.7 percent, and the national average was 11.8 percent.

Based on our sample districts, Arizona spent 12.3 percent of all school district operating expenditures on administration (5.1 percent on district administration and 7.2 percent on school administration); the sample states spent an average of 11.8 percent.

Arizona Has More Small Districts Than Many Other States

A comparison of the number of districts by size clearly indicates that Arizona has a majority of small and very small districts. Arizona has more small and very small districts than half the sample states in our comparison. Only Missouri had a larger percentage of districts with fewer than 600 average daily attendance.

Table 2 summarizes the number of school districts by size in each of the states selected. (The number of districts for Arizona and other states and the district size categories vary depending on the source of information. For this comparison, National Center for Education Statistics' numbers were used.)

Fifty percent of all school districts in Arizona have fewer than 600 students, while Utah, Nevada, and Georgia have relatively few districts with fewer than 600 students, Florida has no districts that small, and Florida, Utah, and Nevada have only one district with fewer than 1,000 students. Other comparisons show that Utah has fewer administrators per student and spends significantly less on district administration per student than any of the other states studied.

TABLE 2

NUMBER OF DISTRICTS BY STUDENT POPULATION SIZE IN SELECTED STATES

	Average Daily Attendance	Total Number Of Districts	Large		Medium		Small		Very Small	
			(5000 or more)	Percent of Total	(1000 to 4999)	Percent of Total	(600 to 999)	Percent of Total	(Less than 600)	Percent of Total
California	4,437,940	1,074	220	20%	331	31%	104	10%	419	39%
Texas	3,075,333	1,062	105	10	320	30	159	15	478	45
Missouri	727,777	543	30	6	137	25	88	16	288	53
Washington	755,141	295	44	15	92	31	38	13	121	41
Arizona	557,252	238	29	12	70	29	21	9	118	50
Georgia	1,054,097	186	49	26	122	66	6	3	9	5
Florida	1,646,583	67	43	64	23	34	1	2	0	0
Utah	408,917	40*	18	45	16	40	1	3	4	10
Nevada	172,993	17	5	29	8	47	1	6	3	18

* The size of one district was not reported.

Source: National Center for Education Statistics "Public Elementary and Secondary Schools and Agencies in the United States and Outlying Areas: School Year 1989-90".

TABLE 3

BENEFITS PROVIDED TO ADMINISTRATORS

BENEFITS[1]	PERCENT OF ARIZONA SAMPLE DISTRICTS, OFFERING BENEFIT[2]	PERCENT OF NATIONAL SAMPLE DISTRICTS, OFFERING BENEFIT[3]
Vacation	96.67%	73.70%
Sick Leave	96.67	98.40
Personal Leave	90.00	90.60
Sabbatical Leave	40.00	59.40
Medical Insurance	100.00	98.00
Dental Insurance	90.00	85.20
Vision Care Insurance	50.00	46.90
Prescription Drugs	96.67	76.00
Income Protection Insurance	40.00	41.70
Group Life Insurance	96.67	79.50
Severance Pay[4]	56.67	37.70
Tuition Reimbursement	10.00	35.30
Convention Attendance	93.33	81.20
Professional Dues	83.33	60.70
Transportation	100.00[5]	96.00[6]
Cost of Physical Exam	23.33	30.00
Professional Liability Insurance	53.33	72.50
Retirement Plan (Other than the State Retirement Plan)	10.00	4.30
Housing or Housing Allowance	13.33	N/A[7]
Other[8]	40.00	N/A[7]

[1] These benefits are provided to superintendents, associate/assistant superintendents, and/or principals.

[2] Arizona statistics are based on our survey of the 30 Arizona sample districts.

[3] National statistics are obtained from the Educational Research Service Report summary published in School Business Affairs, August 1991.

[4] Severance Pay - includes unused sick and/or vacation leave.

[5] Transportation - includes provisions for mileage allowance, use of a vehicle for business only, and use of a vehicle for business and commuting.

[6] Transportation - includes provisions for mileage allowance, annual allowance, monthly allowance, or some other transportation provision. (This provision is not specifically defined by the Educational Research Service.)

[7] N/A - This information is not available on a national basis.

[8] Other - includes benefits such as bereavement leave, cafeteria plan packages, tax-sheltered annuity, and term life insurance.

Comparisons between Utah and Arizona are particularly valuable due to the demographic similarity of the two states. Both states have two major metropolitan areas and numerous small communities scattered throughout. However, Utah has only 40 school districts while Arizona has 238 and 118 of these have fewer than 600 students. Utah's small number of school districts is considered to be an important factor in the state's ability to maintain lower district administrative costs per student than Arizona and nationally.

Arizona Administrators Receive The Same Types Of Benefit Packages As A National Sample

As shown in Table 3, a comparison of the percentage of benefits provided by districts generally without cost to school district administrators in Arizona and nationally indicates that Arizona administrators receive a higher percentage of certain benefits and a lower percentage of others, but for many benefits there were no significant differences.

CONCLUSIONS

Our review of administrative costs and the number of administrators in Arizona compared to the nation and selected states indicated the following:

- Arizona spends slightly less on administration per student than most of the other states in our comparison. However, Utah spends significantly less on administration per student than the other states in the study.
- The number of students per district administrator in Arizona is similar to most of the other states selected for comparison, except Utah and Georgia, which have a significantly higher number of students per administrator.
- Arizona's total administrative expenditures account for about 12 percent of total operating expenditures. District administrative expenditures are 5 percent of total operating expenditures. These percentages are about the same as other states with similar population growth.
- In comparison with other states, Arizona has more very small (50 percent have fewer than 600 students) school districts which may result in higher administrative costs.

CHAPTER 3

COMPARISONS OF CHANGES IN ARIZONA'S AND OTHER STATES' SCHOOL DISTRICT ADMINISTRATIVE COSTS OVER TIME

This chapter addresses changes in numbers of administrators and administrative costs over several years, changes in administrative costs compared to inflation, and changes in instructional costs, and answers the following questions:

- How does Arizona's ratio of students per district administrator compare with the nation and the sample states over the last few years?
- Are there fewer teachers per district administrator now than in the past?
- Have district administrative expenditures increased at a faster rate than instructional expenditures and inflation? Do expenditures for administration represent a larger percentage of total expenditures now than in the past?
- Have administrative costs increased because of increases in Federal and State programs and expenditures?
- Have administrators' salaries increased at a faster rate than teachers' salaries, and inflation?

FINDINGS AND ANALYSES

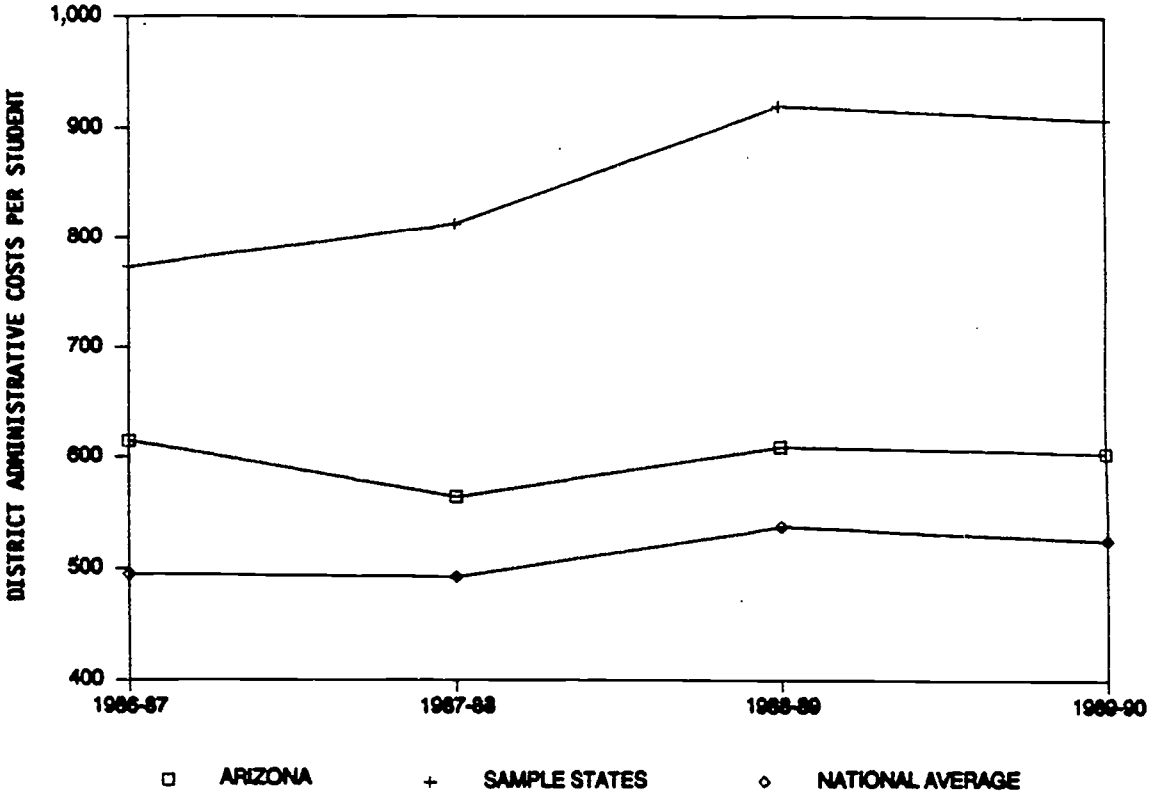
Arizona's Ratio Of Students Per District Administrator Has Changed Very Little Over The Past Several Years

Chart 8, page 32, shows that Arizona's ratio of number of students per district administrator has varied only slightly over the period 1986-87 through 1989-90. These ratios were higher than the national average, but considerably lower than the average of the sample states. The sample states' average was 773 in 1986-87 and 908 in 1989-90.

Nationally, the number of students per district administrator rose slightly over the period, from 495 in 1986-87 to 526 in 1989-90. In Arizona, the number of students per district administrator dropped slightly over the period from 615 in 1986-87 to 605 in 1989-90.

CHART 8

STUDENTS PER DISTRICT ADMINISTRATOR ARIZONA, SAMPLE STATES, AND NATION FROM FISCAL YEARS 1986-87 THROUGH 1989-90



Source: Compiled from data provided by the Arizona Department of Education and the National Center for Education Statistics

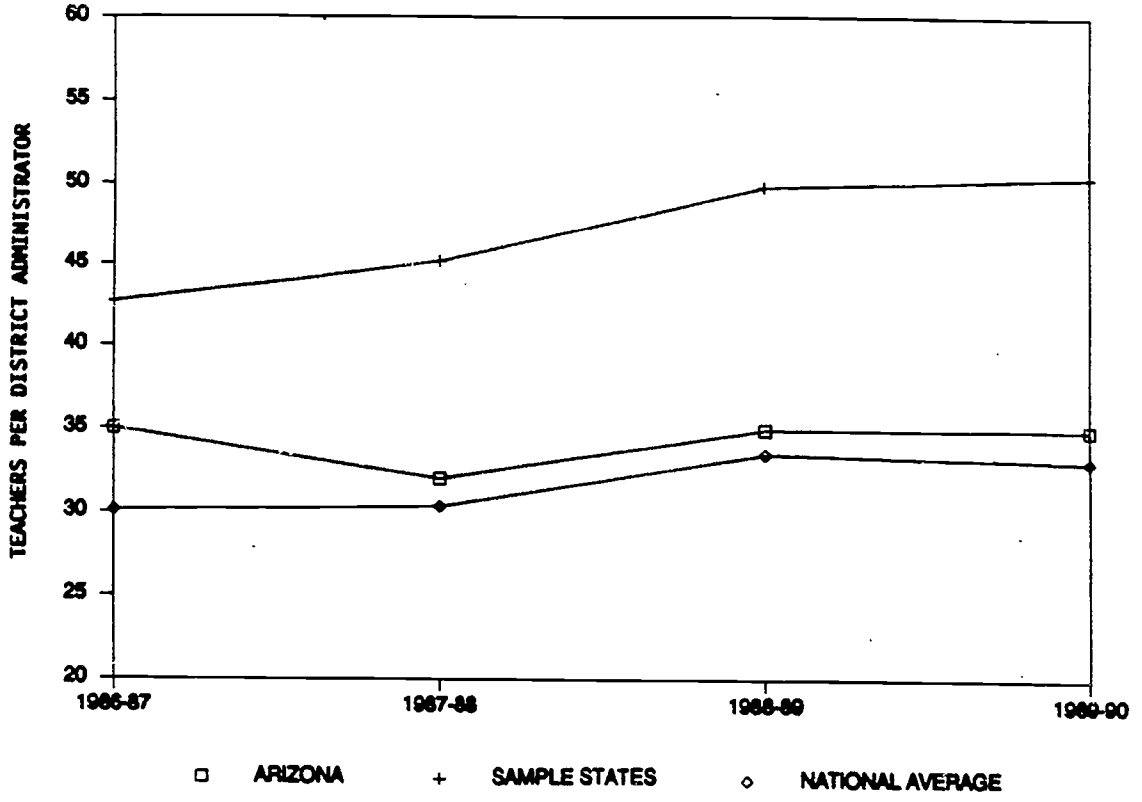
Utah, one of the sample states in the comparison, had a markedly higher ratio of number of students per administrator than any of the other sample states: 1,041 students per administrator in 1986-87 increasing to 1,345 in 1989-90.

Arizona's District Administrator Staffing Has Not Increased When Compared To Teacher Staffing Over The Past Several Years

Chart 9 indicates that Arizona has had slightly more teachers per district administrator than the national average, but considerably fewer teachers per district administrator than the sample states. Chart 9 also indicates that the ratio of teachers to district administrators for Arizona and nationwide has remained fairly constant over the past several years.

CHART 9

TEACHERS PER DISTRICT ADMINISTRATOR ARIZONA, SAMPLE STATES, AND NATION FROM FISCAL YEARS 1986-87 THROUGH 1989-90



Source: Compiled from data provided by the Arizona Department of Education and the National Center for Education Statistics

In addition, a May 1988 article published by the Educational Research Service concluded that nationally, the number of teachers per central office professional staff member, including administrative and professional staff, has remained constant since 1982-83 at about 33-35 teachers per central office professional staff member (Robinson).

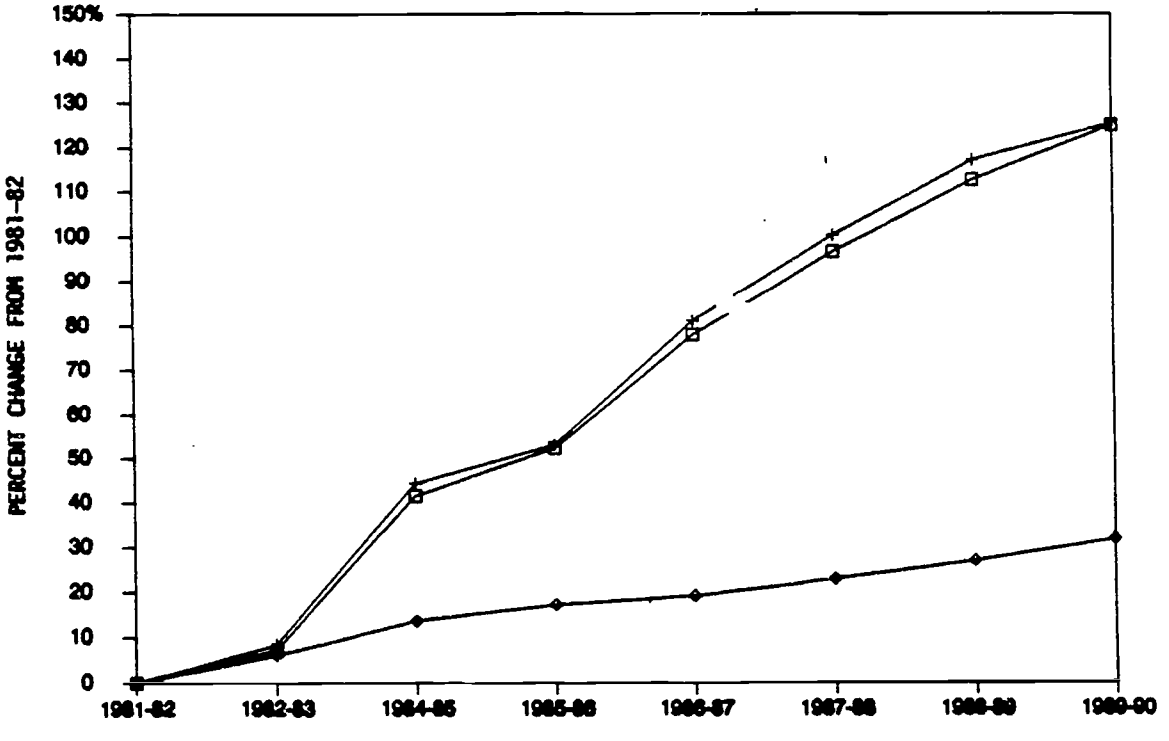
The main reason for the higher number of teachers per administrator in the sample states is the significantly higher ratios of Georgia and Utah.

Administrative Costs Have Increased At The Same Rate As Instructional Costs

District administrative and instructional costs have increased at about the same rate, but at a rate almost four times greater than the increase in the Consumer Price Index (CPI) over the same time period. Two reasons for the large increase in costs in Arizona are an increase in salaries over the past few years (also, see page 35) and an increase in the number of students (about 17 percent over the last decade). Another reason for the substantial increase in administrative costs is that expenditures for medical and health insurance increased dramatically in the last ten years. The Health Insurance Association of America in Washington, D.C., which monitors national expenditures for employee health and medical insurance benefits, reported that expenditures increased about 250 percent between 1980 and 1990, although some increases may be due to changes in coverage. (See Chart 10.)

CHART 10

INCREASE IN ADMINISTRATIVE COSTS COMPARED TO INSTRUCTIONAL COSTS AND THE CONSUMER PRICE INDEX IN ARIZONA FROM FISCAL YEARS 1981-82 THROUGH 1989-90



Source: Compiled from data provided by the Arizona Department of Education

Administrators' Salaries Have Increased At A Rate Greater Than Inflation

For a national sample during the period 1984-85 through 1990-91, salaries of superintendents, principals, business managers, and teachers increased about 37 to 40 percent, while the Consumer Price Index (CPI) increased only 24 percent. The Arizona sample districts reported that salaries of superintendents increased 31 percent, business managers about 41 percent, principals 28 percent, and teachers 27 percent. (See Table 4.)

Therefore, salaries of the sample of Arizona's superintendents, principals, and teachers have increased more than the CPI during the period 1984-85 through 1990-91, but less than the national sample. The sample of Arizona business managers' salaries, however, increased more than the CPI and 4 percent more than the national sample.

TABLE 4

INCREASE OF SALARIES IN ARIZONA COMPARED TO NATIONAL SAMPLE, 1984-85 THROUGH 1990-91

Position		Average Salary 1984-85 (rounded to nearest hundred)	Average Salary 1990-91 (rounded to nearest hundred)	Percentage of Increase
Superintendent	Arizona Sample	$59,700	$78,300	31%
	National Sample	57,000	79,900	40
Business Manager	Arizona Sample	39,800	55,900	41
	National Sample	40,300	55,100	37
Principal	Arizona Sample	40,800	52,000	28
	National Sample	39,400	55,200	40
Teacher	Arizona Sample	23,700	30,200	27
	National Sample	23,600	32,900	39

Source: Educational Research Service, Salaries Paid Professional Personnel in Public Schools, 1984-85 and 1990-91 editions

Except for business managers, the rate of increase in salaries for Arizona superintendents, principals, and teachers has been similar (27 to 31 percent), indicating that Arizona administrators' salaries have not increased significantly at the expense of teachers' salaries.

Administrative Costs Were A Small Portion Of Maintenance And Operation Fund Expenditures Over The Past Ten Years

District administrative costs and instructional costs as percentages of total Maintenance and Operation Fund expenditures were compared to determine whether district administrative costs have increased at a higher rate than instructional costs over time.

Expenditures for district administration and for instruction in Arizona have remained very consistent over the period 1981-82 through 1989-90. District administrative expenditures have consistently accounted for about 4.6 percent of total Maintenance and Operation Fund expenditures, while expenditures for instruction accounted for about 60 percent.

Increased Federal And State Project Expenditures Over The Last Ten Years May Have Resulted In Some Increases In Administrative Costs

On a percentage basis, the increase in Federal projects expenditures has not been as great as that for State projects. However, other factors (such as increases in the number of students, salaries, and the costs of health insurance) have had a greater impact on increased administrative expenditures than Federal and State projects.

Total expenditures for Federal projects by Arizona school districts have increased from $62.6 million in 1981-82 to $109.5 million in 1990-91, or approximately 75 percent. Total expenditures for State projects have increased from $1.7 million to $18.7 million, or 1,000 percent. However, in fiscal year 1990-91, total expenditures for State projects were only 0.6 percent of total Arizona school district expenditures, and expenditures for Federal projects were only 3.3 percent of the total.

One reason cited by some administrators for increased district administrative costs is an increase in paperwork caused by an increase in the number of programs for Federal and State projects.

A 1987 Stanford University study found that while the Federal government has become increasingly involved in the funding and management of education, the high point came in 1977 with programs for rural, urban, migrant, needy, handicapped, and other specific types of students. The study also found that Elementary and Secondary Educational Act of 1965 (ESEA) Federal programs resulted in higher administrative and instructional costs than did non-ESEA programs.

The Stanford study concluded that in comparison to local, Federal ESEA, and non-ESEA funded programs, State funded projects had resulted in the lowest levels of administrative expenditures and staffing (Administrative Science Quarterly).

CONCLUSIONS

Our review of changes in administrative costs and the number of administrators in Arizona over time found that:

- Arizona's ratio of number of students per district administrator has remained fairly constant over the last few years. However, this ratio is higher than the national average, but considerably lower than the average of the sample states.

- The ratio of teachers to district administrators has remained fairly constant over the past several years. Arizona has slightly more teachers per district administrator than the nation, but significantly fewer than the states in our sample.

- Costs for instruction and district administration have increased at about the same rate since fiscal year 1981-82. However, such costs increased 125 percent during this period compared to 32 percent for the Consumer Price Index. Increases in student population, salaries, and health insurance are among several reasons for this disparity.

- As a percentage of Maintenance and Operation Fund expenditures, administrative expenditures remained fairly constant during the period 1981-82 through 1989-90.

- In a sample of Arizona districts, the salaries of superintendents, principals, and teachers increased at a rate lower than the average of a national sample during the period 1984-85 through 1990-91. The salary of business managers increased at a rate slightly higher than the national sample during the same period. However, the salaries of all employees in the Arizona sample and the national sample increased at a rate higher than the Consumer Price Index.

CHAPTER 4

ARIZONA'S SCHOOL DISTRICT RECORDKEEPING SYSTEM

In compliance with Arizona Revised Statutes §15-271, the Uniform System of Financial Records (USFR) was developed by the Office of the Auditor General in conjunction with the Arizona Department of Education to provide a uniform system of financial accounting and reporting for school districts. The USFR chart of accounts requires school districts to classify expenditures by fund, function, and object code.

Currently, school districts may report expenditures at either a summary or a detailed function code level and neither level is required for capital expenditures.

School Districts Generally Did Not Properly Use Function Codes Prescribed In The USFR Chart Of Accounts

Almost all of the 30 sample school districts included in our study used function codes in a manner that was not consistent with guidelines included in the USFR chart of accounts. Specifically, the following deficiencies were noted.

- Administrative salaries were not always charged to the proper function code category.
- Salaries of administrators serving more than one function were not allocated among function codes.
- Summary function codes were used as detailed function codes. For example, employee benefits and miscellaneous expenditures were charged to summary function codes rather than charging these expenditures to the appropriate detailed function codes.
- Expenditures were not always reported by function code.

The USFR Chart Of Accounts Is Not Comparable With The Federal Chart Of Accounts

The U.S. Department of Education, Office of Educational Research and Improvement has developed and maintains a manual entitled Financial

Accounting for Local and State School Systems 1990 that is intended to serve as the standard for all states. The manual contains a uniform chart of accounts for school district financial reporting that provides a more detailed system of account codes than is presently included in the USFR chart of accounts.

The USFR chart of accounts is not presently comparable with the Federal chart of accounts. Arizona is one of only eight states and Washington, D.C., that do not currently use the Federal chart of accounts, or use a chart of accounts that cannot be reconciled to the Federal chart of accounts. The Auditor General was not aware that Arizona did not comply with the Federal chart of accounts prior to this study.

RECOMMENDATIONS

The following actions should be implemented by the Auditor General, in conjunction with the Arizona Department of Education and reviewed by the School Finance Advisory Committee, to improve school district recordkeeping and comparability of school district financial data among school districts within the State and nationally.

- Function codes in the USFR chart of accounts should be revised based on the chart of accounts developed by the U.S. Department of Education, Office of Educational Research and Improvement. This would significantly expand function codes to provide greater detail in recording expenditures, including administrative expenditures, and improve the accuracy and comparability of financial accounting and reporting.

- Arizona school districts should be required to report expenditures of all funds at the detailed function code level. While the USFR allows school districts to report expenditures at the summary code level, doing so reduces the collectibility of detailed expenditure information, and the comparability of financial data among school districts.

REGIONAL SERVICES AND TELECOMMUNICATIONS

CHAPTER 5

REGIONAL SERVICES IN ARIZONA

Our study of county school superintendents and other regional service providers in Arizona determined that the following questions were relevant:

- What county school superintendent duties are required and allowed in statute? How can these duties be modified to provide more cost-effective services?
- Are Arizona county school superintendents comparable in relation to the types of services they provide?
- What other regional services are being provided to school districts in Arizona? Who is providing these services?
- Are these other regional services resulting in a more cost-effective educational system?

We conducted a survey of all counties and then selected the Maricopa, Pima, Pinal, and Yavapai County School Superintendents' offices for further on-site review. Our sample was judgmentally selected, based on information gathered in our initial phone survey. The most important criteria for choosing the sample was the number and types of service programs being administered by county school superintendents' offices. Other factors considered were the number of county school superintendent employees and the number of districts in the county.

Most Of The Duties Currently Performed By County School Superintendents Are Required By Statute

These duties consist of the following:

1. Apportion school monies and notify the country treasurer and the school districts of the amounts apportioned.
2. Process warrants and maintain a warrant register.
3. Maintain school district revenue and expenditure records.
4. Prepare and receive reports to aid in the school district budgeting process.

5. Cause all regular and special elections to be conducted.

6. Appoint school district governing board members to fill vacancies.

7. Administer the special county school reserve fund, including accommodation districts.

8. Maintain records of effective and expiration dates of teachers' and administrators' certificates.

9. Issue certificates of educational convenience.

10. Provide special education services to handicapped pupils, if not being provided by the school district governing board.

11. Monitor home and private schooling.

12. File a report showing amounts received and amounts expended during the fiscal year with the superintendent of public instruction.

13. Submit school district annual financial reports to the superintendent of public instruction.

14. Perform other administrative duties.

Records Maintenance And Warrant Processing Account For Up To 61 Percent of Total Staff Time Spent In Required Statutory Duties

We asked each county school superintendent's office in our sample to distribute staff time based on the duties required by statute, and in the operation of the office. The duties and the time required to perform them were then grouped into the following three categories:

1. Records Maintenance and Warrant Processing - This includes the maintenance of detailed revenue and expenditure records, and effective and expiration dates of teachers' and administrators' certificates. It also includes processing warrants, maintaining the warrant registers and making and recording deposits. The time spent in this category ranged from 37 to 61 percent of total staff time spent on required statutory duties.

2. Administrative Duties - This includes issuing certificates of educational convenience; maintaining and reviewing achievement test results for students attending a private or home school; transporting

students from unorganized territories; operating accommodation districts; conducting elections; appointing governing board members to fill vacancies; assisting districts in the budgeting process; and other miscellaneous duties. The time spent in this category ranged from 21.7 to 32.4 percent of total staff time spent on required statutory duties.

3. Office Operations - This includes the day-to-day operation of the office and the county school superintendent's position. The time spent in this category ranged from 21.2 to 30.6 percent of total staff time spent on statutory duties.

Arizona Revised Statutes Allow County School Superintendents To Perform Additional Duties And Provide Additional Services To Districts

Arizona Revised Statutes (A.R.S.) §15-365 enables county school superintendents to establish service programs that are defined in statute as those programs that deliver services most efficiently and cost effectively as multidistrict or multicounty operations. If a county school superintendent decides to establish a service program, it must be made available to all districts in the county, and the costs must be shared on a user basis.

County school superintendents may establish special small district service programs to meet the special needs of districts with a total student count of less than 600. However, most special small district service program costs are paid by the county through county equalization assistance, and costs not fully covered are paid by users. In some instances, county school superintendents allocate county equalization assistance monies directly to small districts.

Services Programs Provided By County School Superintendents Vary Widely Among Counties.

Service programs can be grouped into four general categories: administrative services, special education services, instructional services, and technology.

Administrative services consist of grant administration, cooperative purchasing, data processing networks, and bookkeeping.

Table 5 shows that 11 county school superintendents administer Federal grants for districts. This includes filing grant applications, accounting for grant monies, and preparing the related completion reports. These 11 county school superintendents are performing this service through special small district service programs. The Mohave County School Superintendent operates a Statewide purchasing coeperative. Two county school superintendents (Apache and Pinal) administer their own data processing consortiums. All county school superintendents with the exception of Apache, Navajo, Pinal, and Yuma, serve as bookkeepers for one or more districts in their counties. Bookkeeping duties include making deposits,

TABLE 5

ADMINISTRATIVE SERVICES PROVIDED BY COUNTY SCHOOL SUPERINTENDENTS

	GRANT ADMINISTRATION	COOPERATIVE PURCHASING	DATA PROCESSING CONSORTIUM	BOOKKEEPING
APACHE	X		X	
COCHISE	X			X
COCONINO	X			X
GILA				X
GRAHAM	X			X
GREENLEE				X
LA PAZ	X			X
MARICOPA	X			X
MOHAVE		X		X
NAVAJO	X			
PIMA				X
PINAL	X		X	
SANTA CRUZ	X			X
YAVAPAI	X			X
YUMA	X			
Total	11	1	2	11

Source: Phone survey of county school superintendents and their staffs.

preparing reports, and maintaining all of the district's accounting records. This is in addition to the accounting records maintained by the county school superintendent, as required by statute.

County school superintendents serve as bookkeepers for all 11 transporting districts. Transporting districts, like regular districts, are required to prepare budgets, keep financial records, and file reports. Since they do not have administrative staffs, budgetary, recordkeeping, and reporting responsibilities have been assumed by county school superintendents. Nine county school superintendents are serving as bookkeepers for approximately 59 percent of the districts with a student population of 100 or less.

Special education services are designed to meet the needs of exceptional students, defined in this study as those students who are gifted or have physical, mental, or emotional handicaps.

County school superintendents are required by A.R.S. §15-764 to provide special education to handicapped students if it is not provided by the student's district. As shown on Map 3, page 49, 12 county school superintendents provide some special education services to handicapped students at small districts. In the counties highlighted in yellow on Map 3, specialists travel to schools so that students may be served in the least restrictive environment. Special education services are provided at central locations in the counties highlighted in red. Centralizing services at one location may seem efficient; however, students may not be able to travel the distance required to reach the central location. Therefore, distance could prohibit a student from receiving needed services. Coconino County provides four districts with funding that is used to hire therapists.

In addition to the services shown on Map 3, several county school superintendents provide special education resource consultants to assist classroom teachers in adapting their rooms, lessons, and materials to the needs of exceptional students. Special education may also encompass programs for preschool children, at-risk populations, and adults. Currently, Maricopa and Pima County School Superintendents provide services to diagnose and prescribe programs to treat at-risk preschoolers. Pima County also provides many adult education programs.

Instructional services may be provided directly through teachers who visit schools on a shared basis or by means of a distance learning system. Self-instructional laboratories set up in individual schools are also direct instructional services. Indirect instructional support consists of curriculum assistance in specialized areas from consultants and resource centers, competency-based objectives (e.g., essential skills), and test banks (e.g., student assessment plans). Areas of curriculum assistance include English as a second language, foreign language, social studies, science, special education, and vocational education. Instructional services also include inservice training for teachers, special programs (e.g., career education, migrant education, and vocational education), and special presentations (e.g., a children's theater performance) at the schools. (See Table 6.)

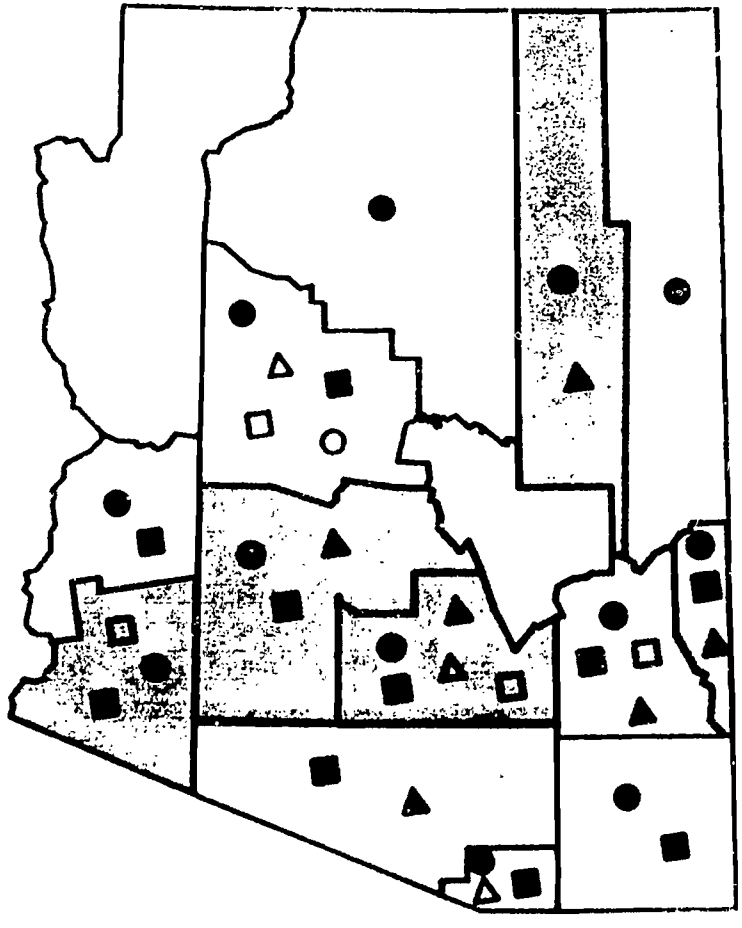
TABLE 6

INSTRUCTIONAL SERVICES PROVIDED BY COUNTY SCHOOL SUPERINTENDENTS

	DIRECT ASSISTANCE	CURRICULUM SUPPORT	TEACHER TRAINING	SPECIAL PROGRAMS	SPECIAL PRESENTATIONS
APACHE	X				
COCHISE		X			
COCONINO					X
GILA			X		
GRAHAM					
GREENLEE					
LA PAZ					X
MARICOPA		X			
MOHAVE	X	X			
NAVAJO		X			
PIMA		X	X		
PINAL		X	X	X	X
SANTA CRUZ					
YAVAPAI			X		
YUMA				X	
Totals	2	6	4	2	3

Source: Phone survey of county school superintendents and their staffs.

SPECIAL EDUCATION SERVICES PROVIDED BY COUNTY SCHOOL SUPERINTENDENTS



- ● Therapists (12)
- ■ Psych/Counselors (10)
- ▲ Teachers (6)
- □ Nurses (4)
- ○ Social Workers (1)
- △ Chem Abuse Program (3)

Itinerant Services
Centralized Services
Both

MAP 3

Technology serves both educational and administrative purposes. It includes hardware, software, and the training necessary to make optimum use of these materials.

On-line networked data processing systems used by county school superintendents are examples of technology supporting administrative purposes. Technology, such as computers and telecommunications equipment, can also support educational purposes. The addition of a modem allows students using computers to access databanks and other students in different locations. Some county school superintendents have supplied hardware and software to small districts by either directly purchasing the hardware or providing the necessary funding to the districts.

Maricopa, Pima, Pinal, And Yavapai County School Superintendents Offer Unique Service Programs

As previously mentioned on page 43, four county school superintendents' offices were selected for detailed review because of the unique programs they offer. A discussion of the unique service programs provided by each of the four county school superintendents follows.

Maricopa

The Homeless Education Program (HEP) is for K-8 students living within the greater Phoenix area who, because of their homeless condition, cannot be enrolled in an established district. Although the program's curriculum is closely aligned with the State's essential skills requirements, it also incorporates services necessary to meet the special needs of homeless children. Students are screened for physical, emotional, and psychological needs, and then taught self-esteem and basic skills. Students are then transported to the New Day School for regular education classes. HEP's main objective is to stabilize the educational side of these children's lives.

The East Valley Alternative High School (EVAHS) in Chandler provides an alternative school for grade 6-12 students who have dropped out or have been suspended or expelled from their local districts. EVAHS consists of

on-site group instruction and independent study blocks. The program currently serves 309 students, some of whom travel from as far as Laveen and Peoria, and has a waiting list of 35 students. Plans are underway to open an alternative school in the west valley, offer vocational programming for these students at the East Valley Institute of Technology, and implement a program of computer-assisted instruction.

Pima

The Pima County Adult Education (PCAE) program provides educational services at no charge to adults living in Pima County. The program was established on the belief that when parents are more educated, school-age children will profit more from their educational opportunities. Therefore, PCAE provides adults with opportunities for obtaining a basic education and enhancing work and social skills.

PCAE offers classes in reading, writing, and math; GED preparation; English as a second language; American lifestyles; test-taking skills; computerized accounting and word processing; and counseling to help overcome barriers to education and employment. Free child care, transportation, job search assistance, and job placement are also provided.

Pinal

The Pinal County Data Processing Consortium is a data processing network in which the county school superintendent's office and 18 of the 19 districts in the county are on-line. This network eliminates duplication of effort in entering financial transactions and maintaining accounting records. Besides accounting and fiscal functions, the Consortium provides report card processing, class scheduling, attendance reporting, and control of supplies and fixed assets. The Consortium also offers consultation, training, software modifications, and upgrades.

The county school superintendent participates in two intergovernmental agreements (IGA) with the Arizona Department of Education (ADE). The first IGA relates to Arizona Student Assessment Plan (ASAP) legislation that is

intended to provide ways to assess a student's ability to solve problems by using what the student has learned. The Pinal County School Superintendent's office has contracted to provide training, technical assistance, and materials regarding ASAP to 63 Arizona districts, most of which are small and rural. Through the second IGA, the Pinal County School Superintendent is processing and analyzing annual evaluation data for ADE's chemical-abuse prevention program.

Yavapai

Although Yavapai County is the 7th largest county in Arizona in square miles, it ranks 13th in average student population per district. The Yavapai County Small Schools Project (YCSSP) was created to meet the challenge of providing a variety of high-quality special services to a low-incidence population in a low-density area. YCSSP, funded through Federal and State grant monies and county appropriations, provides itinerant speech therapists, psychologists, and a social worker for 12 small districts in the County.

In addition, YCSSP pays other entities for services they provide to small districts, such as occupational and physical therapists. The YCSSP also assists districts in setting up their own special small district service programs. For example, the YCSSP employs a consultant/program coordinator to integrate the chemical-abuse prevention program into the present curriculum of existing health, science, and citizenship classes for a nine-district cooperative.

Variation In Services Provided By County School Superintendents May Be Due To Differences In County Sizes And Student Populations

The offices of Arizona county school superintendents are different in relation to the number, composition, and location of districts in their counties, the number of students they serve, the size of their staff, and county appropriations. These differences may contribute to the variety of services they provide. Map 2 on page 11 and Tables 7 and 8 on pages 54 and 55, respectively, highlight some of the factors leading to disparities among Arizona counties.

Map 2 shows that most counties consist of rural districts. Arizona has 28 large districts (5,000 or more students) in six counties representing 12 percent of all districts. The remaining counties have medium (600 to 4,999 students) and small (fewer than 600 students) districts. The 187 medium and small districts comprise 83 percent of all districts in Arizona. The other 11 districts, or 5 percent of the total, are transporting districts.

Table 7 shows the ratios of students per square mile and per district, and the average number of square miles per district and illustrates that geographical size is one important difference between counties. For example, Coconino, the largest county, is 18,562 square miles and has

TABLE 7

COMPARISON OF STUDENTS AND SCHOOL DISTRICTS PER SQUARE MILE

	COUNTY SQUARE MILES	STUDENT POPULATION (ADM)	NUMBER OF SCHOOL DISTRICTS	NUMBER OF STUDENTS/ SQUARE MILE	NUMBER OF STUDENTS/ SCHOOL DISTRICT	SQUARE MILES/ SCHOOL DISTRICT
COCONINO	18,562	18,113	8	0.98	2264	2320
MOHAVE	13,227	15,439	15	1.17	1029	882
APACHE	11,127	13,532	11	1.22	1230	1012
NAVAJO	9,910	16,342	11	1.65	1486	901
PIMA	9,240	99,226	17	10.74	5837	544
MARICOPA	9,226	338,384	57	36.68	5937	162
YAVAPAI	8,091	15,986	23	1.98	695	352
COCHISE	6,256	18,622	24	2.98	776	261
YUMA	5,561	21,881	9	3.93	2431	618
PINAL	5,386	22,087	19	4.10	1162	283
GILA	4,748	7,320	8	1.54	915	594
GRAHAM	4,618	5,306	7	1.15	758	660
LA PAZ	4,430	2,684	6	0.61	447	738
GREENLEE	1,876	2,888	5	1.11	418	375
SANTA CRUZ	1,246	7,262	6	5.83	1210	208

ADM: Average Daily Membership

Source: Local Government Directory, July 1991; Annual Report of the Superintendent of Public Instruction for fiscal year 1990-91.

8 districts. Santa Cruz, the smallest county, is only 1,246 square miles but has 6 districts. Another important difference is the density of student population. Maricopa and Navajo Counties closely resemble each other in geographic size (9,226 and 9,910 square miles, respectively), yet there is a tremendous difference in the number of districts and the density of their student populations. Maricopa County has 338,384 students attending 57 districts. This means that, on average, there are 36.68 students per square mile and 5,937 students per district. In contrast, Navajo County has 16,342 students attending 11 districts, resulting in 1.65 students per square mile and 1,486 students per district.

Further study of the county school superintendents' offices reveals variances in funding and staffing among the counties. (See Table 8.)

TABLE 8

COUNTY APPROPRIATIONS EXPENDED FOR ADMINISTRATION OF COUNTY SCHOOL SUPERINTENDENTS' OFFICES IN FISCAL YEAR 1990-91

	APPROPRIATIONS EXPENDED	NUMBER OF CSS EMPLOYEES	NUMBER OF SCHOOLS	NUMBER OF SCHOOL EMPLOYEES	NUMBER OF STUDENTS
APACHE	$ 178,298	9	31	2,038	13,532
COCHISE	219,911	8	52	2,134	18,622
COCONINO	201,747	6	37	2,065	18,113
GILA	160,247	5	24	891	7,320
GRAHAM	106,007	3	14	539	5,306
GREENLEE	95,320	3	8	256	2,088
LA PAZ	97,390	3	9	357	2,684
MARICOPA	1,355,108	26	453	33,508	338,384
MOHAVE	168,410	5	30	1,527	15,439
NAVAJO	173,390	7	38	2,052	16,342
PIMA	435,835	14	189	10,771	99,226
PINAL	336,865	20	52	2,636	22,007
SANTA CRUZ	133,735	5	15	673	7,262
YAVAPAI	279,516	7	45	1,739	15,986
YUMA	174,375	5	33	2,249	21,001

CSS: County School Superintendent

Source: Annual Report of the Superintendent of Public Instruction for Fiscal Year 1990-91.

The Types Of Services And Areas Covered By Other Regional Service Providers In Arizona Are Limited

Regional service programs and cooperative efforts among districts have been developed outside county school superintendents' offices. The larger, more active and long-term programs, as shown in Table 9, formed the basis of our study.

Data Processing Consortiums Provide Savings

The Arizona Public Schools Computer Consortium (NAU Consortium) provides data processing for financial and student service needs. The financial system provides school districts with general ledger accounting, personnel and payroll management, and supplies inventory and fixed asset control. It also generates reports. The student service system maintains records of student discipline, health, grades, transcripts, and special program enrollment. Class scheduling is also provided.

Membership in the NAU Consortium is voluntary, yet 34 of 35 districts in Coconino, Mohave, and Yuma Counties and one district in Maricopa County currently participate. The Consortium is governed by an executive board.

The NAU Consortium is entirely funded by participating districts. Each district pays a yearly base fee for each system used, as well as a usage fee. During fiscal year 1990-91, the per student cost was $3-4 for the financial and administrative system and $7-8 for the student service system. In total, the cost per district for services ranged from $3,500 to $143,000. However the amount of cost savings to the districts for subscribing to the consortium rather than instituting their own data processing systems is not available. Similar consortiums in other states have documented operating cost reductions of at least 40 percent for data processing. Data processing consortiums provide additional savings by cooperatively purchasing hardware and software, maintaining equipment, and providing other related support services.

TABLE 9

EXAMPLES OF OTHER REGIONAL SERVICES IN ARIZONA

TYPE OF REGIONAL SERVICE	YEAR ESTABLISHED	NUMBER OF COUNTIES SERVED	ENTITIES SERVED	APPROXIMATE EXPENDITURES F/Y 1990-91	BASIC SERVICES PROVIDED
ADMINISTRATIVE SERVICES					
DATA PROCESSING					
Arizona Public Schools Computer Consortium	1974	4	35 SD 3 CSS	$ 752,000	Offers financial, student records, inventory, property, and special micro packages.
Navajo County Data Processing Consortium	1976	1	9 SD 1 CSS 2 CD 1 City 1 CCD	371,000	Offers financial, student records, inventory, and property control systems.
INSURANCE POOLS					
Arizona School Risk Retention Trust	1986	15	103 SD	2,936,000	Provides property and general liability insurance coverage.
Arizona Public Employee Trust	1980/ 1983	2	11 SD 1 CTY 3 Cities	3,000,000	Provides health, dental, vision, and life insurance coverage for approximately 1,800 employees. Two trusts merged in 1991.
Employee Benefit Trust for Small School Districts	1979	2	8 SD	850,000	Provides health, dental, vision, and life insurance coverage for 450-500 employees.
COOPERATIVE PURCHASING					
Mohave Educational Services Cooperative	1971	15	215 SD	200,000	Processed $20 million worth of goods and services (9,000 purchase orders) through the cooperative during 1990-91. Provides some special education services and a media center.
INSTRUCTIONAL SERVICES					
VOCATIONAL EDUCATION					
East Valley Institute of Technology District No. 401	1973/ 1990	1	10 SD	3,090,000 (1991-92 budget)	Offers 24 vocational and technical education programs for approximately 1,000 students. District is in first year of operation.
SPECIAL EDUCATION SERVICES					
Maricopa Special Services Consortium	1971	1	3 SD	634,300	Provides special education services and at-risk programs.
Arizona Schools for the Deaf and Blind	1912	15	90 SD	28,370,000	Provides educational opportunities for approximately 1,100 sensory impaired children.
TECHNOLOGY					
Arizona Education Telecommunication Cooperative	1987	15	SD CCD UNIV	84,000	Plans for coordinated uses of telecommunications, reviews technology initiatives, and studies the feasibility of a statewide network.

CCD: Community College Districts
CD: Other County Departments
CSS: County School Superintendents
CTY: Counties
SD: School Districts
UNIV: Universities

There Is A Trend Toward School Districts Establishing Or Participating In Insurance Pools As A Means Of Reducing Costs For Various Types Of Insurance

Legislation in 1986 allowed two or more public agencies to purchase insurance jointly or to pool monies and retain risks for property and liability losses, and workers' compensation and disability claims. Arizona School Risk Retention Trust provides property and general liability insurance coverage to districts within the State. Membership in the Trust has grown from the original five participating districts to 103 districts representing all 15 counties. The Trust is governed by a nine-member board elected by participating districts.

Another type of trust is the employee benefit trust. At least six such trusts currently provide health, dental, vision, and life insurance coverage for district, county, and city personnel. Two of these trusts are listed as examples in Table 9, page 57. Most are for self-insurance with stop-loss coverage provided by an insurance carrier. Other trusts simply allow districts to obtain lower premiums by pooling risks. All such trusts are funded by participating personnel or districts. Actual cost-savings information is not available from any of the trusts.

Cooperative Purchasing Program Resulted In Significant Savings To School Districts

The Mohave Educational Services Cooperative (MESC) provides a cooperative purchasing service to school districts on a Statewide basis. MESC's cooperative purchasing program began in 1985, and by 1991 over 95 percent of Arizona school districts participated in the program. MESC processed 9,000 purchase orders for computer hardware and software, and other related items and services, worth $20 million. MESC is funded entirely by user charges and grants. Each district outside the county pays a one percent service charge on the items it purchases. The following examples illustrate specific cost savings provided by the program.

- Districts purchased computers costing approximately $14 million through MESC during 1990-91. Prices offered through MESC resulted in a net savings of two percent, or about $280,000, because of the volume. MESC saved districts an additional $360,000 on other contracts for hardware, software, and assorted high-tech equipment. Additionally, through a Statewide contract for VHS tapes, MESC saved $30-570 per title for a total savings of over $200,000 on media purchases.

- Districts realized savings through reduced bid preparation time. Developing and approving specifications, drafting and distributing bids, maintaining current vendor lists, publishing and evaluating bids, and selecting vendors are time-consuming aspects of the bidding process. District officials estimate that it costs between $500 and $3,000 to issue one request for proposals. MESC maintains a catalog of more than 100 bid contracts for which this entire process has already been performed, and estimates that this service has saved districts at least $250,000.

Joint Vocational And Technical Education Districts Are Just Beginning To Develop In Arizona

Legislation enacted in 1990 allowed the formation of joint vocational and technical education districts. The East Valley Institute of Technology District No. 301 was formed to provide vocational education programs. During its first year of operation, 1991-92, the Institute is offering 24 vocational and technical education programs to approximately 1,000 students in 10 districts.

The Institute is funded through State aid and has applied for two grants. It is also authorized by statute to charge tuition for students from nonmember districts and assess property taxes, although it has not done so. The Institute is governed by a board consisting of elected members. Cost-savings information on the Institute is not available; however, the tremendous initial investment in equipment and facilities required by vocational and technical education programs and the large number of programs offered by the Institute will likely make it financially and educationally attractive to many districts.

Special Education Programs Have Enabled Districts To Provide Services Not Otherwise Available To Educate Children With Special Needs

The Maricopa Special Services Consortium, established through an intergovernmental agreement, provides the services of psychologists, speech

pathologists, occupational and physical therapists, teachers, and aides for approximately 220 students. It also provides special transportation for handicapped students. Services are funded through user district charges. The Consortium also uses grant monies to provide preschool, counseling, special and migrant education, and teacher training programs.

The Arizona State Schools for the Deaf and the Blind (ASDB) promote and maintain educational opportunities for sensory-impaired children. ASDB operates numerous programs to meet Federal and State mandates, and serves the special needs of approximately 1,100 students.

ASDB established a pilot regional cooperative program to provide educational services for sensory-impaired children. Currently, only the North Central Region, based in Flagstaff, is funded to evaluate children, and provide the specialized services of itinerant teachers, audiologists, and interpretor tutors directly to students. This generally eliminates the need for member districts to hire specialists for low-incidence special education needs or to send students to ASDB facilities in Phoenix or Tucson.

ASDB also operates regional services through two schools in Tucson and two in Phoenix. They serve as examples of early childhood outreach service delivery to sensory-impaired children and their families. ASDB is funded primarily by State appropriations; however, Federal monies and private donations also provide some funding. Specific cost savings information is not available.

The Maricopa Special Services Consortium and the ASDB programs have enabled districts to provide services not otherwise available, and meet Federal and State mandates to educate children with special needs in the least restrictive environment.

TECHNOLOGY

A detailed discussion of telecommunications technology in Arizona begins on page 69.

CONCLUSION AND RECOMMENDATION

County school superintendents and school districts each maintain accounting records as required by statute thus causing a duplication of effort. County school superintendents are also required to maintain records of teacher and administrator certification dates, prepare warrant registers, process warrants, deposit monies, reconcile cash balances to the county treasurer, and prepare and submit Federal grant completion reports and annual financial reports. We recommend that school districts be solely responsible for performing the duties described above.

Regional services in Arizona have been beneficial to school districts. However, the number and types of services offered to districts are limited and vary widely among counties.

CHAPTER 6

REGIONAL SERVICES ACROSS THE NATION

We conducted a study of regional services across the nation and determined that the following questions were relevant:

- What types of services are being provided on a regional basis to school districts in other states?
- Does providing services on a regional basis provide cost savings or any other benefits?
- How are the providers of regional services in other states structured?

Many States Have Developed Education Service Agencies (ESAs) To Provide Regional Services To School Districts

ESAs are defined in this report as units displaying four distinct characteristics. First, they are usually formed for the purpose of promoting cooperation among districts or sometimes as extensions of state departments of education. Second, they provide many types of services, not just one. Third, taken together, they compose a statewide or almost statewide system. Fourth, they are governed by their members.

We sampled 14 states to review the services, cost savings, and structure of their ESAs. Based on 1990 population figures, all 50 states were categorized as small, medium, and large. Three states were selected from each category plus five others based on recommendations from members of the advisory review committee, referrals from other states, geographic location, and to include additional medium-sized states for comparison with Arizona. California, Colorado, Florida, Georgia, Kansas, Kentucky, Michigan, Minnesota, Nevada, South Carolina, South Dakota, Texas, Washington, and Wisconsin were selected as our sample states. Of these states, nine have developed ESAs, at least six of which replaced the office of county school superintendent. Only California maintains this office.

Substantially More Services Are Offered To Districts Through ESAs In Other States Than Are Offered To Districts In Arizona

ESAs offer a substantial number of services. By providing a large number of services, ESAs have helped equalize educational opportunities for students. The following are a few examples of services provided by ESAs in other states.

- The Southeast Kansas Education Service Center (ESC) has developed SPECTRA, a third-party billing system for services provided by schools to children with special health care needs. Through this program, districts receive Medicaid reimbursement training and updates on pertinent litigation. Districts are also able to recover costs from private insurance and/or Medicaid for special education services. The ESC retains a small portion of the money received from Medicaid or private insurance to cover administrative costs of operating the program.

- The Southwest/West Central Educational Cooperative Service Unit of Minnesota operates a media center that includes science kits, a robot, CPR training units, a mobile planetarium, and special education materials.

- The Northeast Florida Educational Consortium operates a testing service program that purchases testing materials, coordinates a schedule allowing member districts to share test booklets, and provides computerized scoring and bulk purchasing of answer sheets.

See Appendix F for a complete list of the types of services provided by ESAs.

ESAs Have Documented Substantial Cost Savings And Appear To Provide A Cost-Effective Means Of Delivering Services To Districts And The State

Many of the services provided to schools by ESAs would not have otherwise been available because of the cost or a lack of expertise. Although many ESAs either have not determined or have not documented the cost savings they provide, ESAs in eight states provided us with over 30 examples of savings in 20 different types of services. Four examples of these savings are presented below.

- The cooperative purchasing service of the First District Regional Educational Service Agency (RESA) in Georgia serves 15 school districts, offers over 1,000 items, and made sales of $1,957,399 in 1990-91. The RESA compared its prices to four other sources (the manufacturer's list price, Wal-Mart, The Office Depot, and the state purchasing system) on $322,723 worth of identical items purchased by the RESA during the year. The RESA provided savings of 71 percent over the manufacturer's list price, 33 percent over Wal-Mart's and the Office Depot's price, and 15 percent over the state purchasing system's price.

- In July 1991, an efficiency study on the data processing system of the Region IV Education Service Center of Texas compared the data processing costs for districts using the Region IV system to districts within Region IV that use an in-house system. Only recurring or operating costs were included in the comparison to insure consistency among the districts. The study concluded that, on the average, the total data processing cost was $13.89 per student for districts using the Region IV system and $23.73 per student for districts not using the Region IV system, saving districts an average of 41 percent.

- The Southwest/West Central Educational Cooperative Service Unit (ECSU) provides the services of school psychologists, program coordinators, special education teachers, and low-incidence consultants, such as teachers for the deaf and blind. Compared to mental health centers, hospitals, and private practitioners, the ECSU saves member districts an average of 61 percent for psychologists, 57 percent for coordinators, 48 percent for teachers, and 81 percent for low-incidence consultants. The state of Minnesota also realizes cost savings by working with only one reporting unit rather than 72 separate districts. In 1991, the ECSU saved its member districts $2,846,532 just in special education services.

- Educational Service District (ESD) #101 of Washington provides instructional programs and coursework for students, as well as staff development and inservice training for staff using telecommunications through its Satellite Telecommunications Educational Programming (STEP) network. The network offered six courses to students in 48 participating districts during the 1989-90 school year. Each district saved an average of $15,705, for a total savings of $753,840. In addition to cost savings, the STEP network enables schools to offer courses that would have been unavailable to them using a traditional classroom setting. ESD #101 has documented cost savings in excess of $6,650,000 in just a portion of the services it offers.

Education Service Agencies Can Be Created And Operated In Numerous Ways

Every state has taken a unique approach in creating and operating ESAs. The structure and operation of ESAs are described below in terms of six major elements: formation, governance, services, clientele, membership, and funding. The various approaches to each element may be mixed to form any number of potential ESA structures.

Formation - There are two primary approaches in forming geographic boundaries. The most common approach used by the states we surveyed is to specify the exact boundaries for each ESA, either by law or through state agency regulations. These boundaries sometimes follow the boundaries of a current or previous governmental entity. Other states enact enabling legislation allowing ESAs to form wherever two or more districts wish to work cooperatively. ESA regions occasionally overlap and may vary greatly geographically or in the number of districts served.

Governance - The governance element is very similar among states. Each ESA reviewed in this study had a governing board made up of board members from participating districts. One ESA board included a number of lay members equal to 1/3 of the entire board, and an official from the state department of education as an ex officio member.

In addition to a governing board overseeing operations, many ESAs have advisory boards. These advisory boards typically consist of superintendents or other administrators from member districts. Some states also include teachers, parents, college representatives, and lay members on their advisory boards.

Services - The number and types of services provided by ESAs are generally determined by local districts, and sometimes by law or state agency regulation. For those ESAs that are required to provide certain services, the number and types of required services varies widely from state to state.

Clientele - Many ESAs were formed by districts to provide services to themselves. A few were formed as extensions of their respective state departments of education to provide services for the department. However, most ESAs provide services for both districts and the state department of education.

Membership - Approximately half the states surveyed do not require districts to use any ESA services. Districts may obtain services elsewhere or may provide services for themselves. In the other states surveyed,

membership is required for some services but voluntary for others. It is more common for the ESA to be required to provide certain services than it is for the districts to be required to use them.

Some states that require district participation in an ESA have allowed large districts not to participate, or to be considered ESAs themselves. Other states allow districts to join ESAs outside their immediate area or join more than one ESA. Additionally, many states allow ESAs to include both public and private schools, other agencies, or schools of higher education.

Funding - ESAs are funded by direct state appropriations, user charges, and grants. Some ESAs rely entirely on user charges and grants, receiving no direct state appropriations. One ESA included in our study receives 80 percent of its funding from state appropriations. Generally, however, we found that ESAs receive up to 10 percent of their funding from state appropriations and the remainder from user charges and grants. States that provide funding may do so on the basis of a flat amount annually, or an amount based on the ESA's cost of offering state-required services. A few states have given ESAs limited taxing authority as an additional source of funding.

ESAs can be structured and operated in numerous ways using almost any combination of the methods described above. Appendix G explains how Colorado's and Washington's ESAs operate as examples of how these approaches can be combined.

CONCLUSION AND RECOMMENDATION

Education Service Agency (ESA) systems in other states offer substantially more services to more school districts than are currently offered to districts in Arizona either by county school superintendents or other regional service providers. ESAs provide a means for districts to retain local autonomy while realizing cost savings by using cooperative services and reducing duplication of programs, services, and personnel. ESAs have also contributed to more equitably distributing educational opportunities across regions.

ESAs should be established in Arizona. If legislation is proposed to establish such a system, it should allow each ESA to meet the specialized needs of its member districts, and these member districts should be involved in the development of their ESA. Once established, ESAs should be allowed to evolve as necessary. However, the legislature may wish to review them periodically to ensure that elements such as governance, boundaries, and the number of districts served are still appropriate.

The geographic boundaries of each ESA should be based on criteria such as services provided, number of school districts served, number of students, distances among and between districts and the ESA center, and the topography of the region. However, because of county sizes, shapes, and population density patterns, county boundaries do not appear to be appropriate boundaries for ESAs.

Each ESA should be governed by a board made up of governing board members from participating entities. Each ESA may also have an advisory board consisting of district administrators, teachers, parents, and others interested in district affairs.

ESAs should be allowed to provide services as requested by member entities and should not be required to provide any particular service. Additionally, districts should participate on a voluntary basis. To promote even greater cost-effectiveness, districts should be allowed to join ESAs outside their local areas. To increase economies of scale and promote communication and cooperation, universities, colleges, private schools, other governmental units, and the private sector should also be allowed to participate in ESAs.

ESAs should be funded primarily by user charges and grants to help ensure that ESAs are responsive to member district needs and provide services in a cost-effective manner. It is also important to provide stability and a base level of support for ESAs through a small amount of direct appropriation. Such stability and support is particularly important in the early stages of ESA development.

CHAPTER 7

TELECOMMUNICATIONS TECHNOLOGY ACROSS THE NATION AND IN ARIZONA

We conducted a study to determine whether technology, in relation to school district management and personnel training functions, has resulted in more cost-effective educational systems across the nation and in Arizona. The following questions were determined to be relevant.

- What is telecommunications technology?
- What is the status of telecommunications technology across the nation?
- What is the status of telecommunications technology in Arizona?
- Has the use of telecommunications technology resulted in more cost-effective educational systems?

We collected information from a sample of 14 states across the nation, all 15 county school superintendents in Arizona, regional organizations in Arizona, and other materials and publications. Based on the information gathered, the relevant technology was determined to be for telecommunications and the most prevalent educational use of telecommunications was determined to be for the expansion of curriculum.

The National Trend Is Toward The Development Of Single Comprehensive Networks That Utilize Telecommunications Technology

Telecommunications technology is the means for transmitting a large volume of information (e.g., audio, video, and data signals) over distance at great speed. Telecommunications technology includes cable, microwave, fiber-optic, and satellite technologies. Instructional television fixed service, a portion of the microwave spectrum dedicated to educational services, is also included.

There are approximately 155 fully and partially implemented educational telecommunications networks within the 50 states. They range from those serving a single purpose or type of institution, to those serving many purposes and institutions.

States commonly contain a number of individual or regional networks not integrated under one system. However, many states are working toward the development of single comprehensive networks that utilize current technologies and serve the needs of the entire state. At the present time, the most common use of telecommunications is to provide postsecondary school courses. For example, universities televise courses taught at one location to students at remote locations, such as branch campuses. With permission, school districts tape programs developed by the Corporation for Public Broadcasting for viewing at a later date. Teleconferencing, useful for meetings and inservice training, is also possible. With the use of computers, telecommunications equipment can be used to transfer data, and to access databanks and electronic bulletin boards.

Arizona Does Not Yet Contain A Fully Implemented Statewide Educational Telecommunications Network

Many school districts are not fully utilizing the capabilities of their telecommunications systems. In addition, because of either the lack of money or expertise in the area of telecommunications technology, many districts have been unable or reluctant to purchase equipment and incorporate available programming into their curriculum. Several county school superintendents have recognized the need for telecommunications equipment and purchased it for some of the small districts.

The Yavapai County School Superintendent purchased a basic satellite downlink (receiver) system for each of 12 small rural districts (districts with fewer than 600 students). The systems are used to receive programming such as foreign language courses from Northern Arizona University, and broadcasts or tapes of major news events and science programs. Other county school superintendents used Special Small District Service Program Fund monies to provide equipment.

AETC Study Concludes That A Statewide Network Is Feasible

The Arizona Education Telecommunications Cooperative (AETC), established in 1987, consists of representatives from the Arizona Department of

Administration, the Arizona Board of Regents, universities, community colleges, the Arizona Department of Education (ADE), and the public schools. The purpose of AETC is to plan for coordinated uses of telecommunications, review technology initiatives, and study the feasibility of incorporating the State's telecommunications capabilities into a Statewide telecommunications network. The network would serve educational and administrative purposes.

In January 1990, AETC hired a consultant to study the telecommunications technologies in the State and the technical feasibility of developing a Statewide network. The study concluded that a Statewide network was feasible if a satellite and land-based infrastructure for full broadcast video, compressed video, and high-speed data transmission were added to existing technologies. The cost of the land-based infrastructure was projected to be $12,750,000, an amount which did not include the incremental costs for users to link into the network.

AETC has also developed a comprehensive outline of objectives for coordinating and implementing a Technology Integrated Educational Delivery System (TIEDS) as part of a Statewide network incorporating universities, community colleges, and the K-12 system. TIEDS, A K-12 Master Plan for the Infusion of Technology in Arizona Schools in the Teaching/Learning Environment was published by ADE in July 1990 in response to an Arizona State Board of Education policy directing it to develop a plan for utilizing telecommunications technology in the K-12 system. TIEDS' first recommendation is to establish a Statewide telecommunications network to provide for information transfer among school districts, other educational entities, and ADE. This would increase productivity by reducing paperwork. Once such a network is in place, training for teachers and administrators through Statewide workshops, seminars, conferences, and telecourses could be provided. A variety of student courses through distance learning programs and access to information through databanks would also be possible.

In working toward establishing a Statewide educational telecommunications network, AETC's Operating Committee has hired a development coordinator and initiated three projects. The projects are to improve ADE's Arizona EdLink

system, provide assistance to schools in implementing instructional television fixed service, and study options for providing telecommunications to certain school districts.

Telecommunications Provides Cost-Effective Educational Programs

The use of telecommunications would allow districts to expand curriculum and staff training, process and report data in a more accurate and timely manner, and reduce the costs of handling and storing large quantities of physical records. Additional computer programming at the Arizona Department of Education would allow the agency to use telecommunications in processing teacher and administrator certificates, and electronically receive documents such as district budgets and annual financial reports. The use of telecommunications to provide courses at remote sites for low-density populations could also produce cost savings when compared to the cost of providing site-based teachers.

CONCLUSION AND RECOMMENDATION

Efforts to establish and coordinate telecommunications systems throughout Arizona should be increased. Telecommunications serve numerous educational and administrative purposes, such as distance learning, teacher training, and data transmission. The use of telecommunications in education is growing nationally and in Arizona. Arizona colleges and universities, as well as a small number of school districts, are currently using telecommunications in their daily operations. However, most districts have had difficulty purchasing and establishing telecommunications systems, and are not fully utilizing the capabilities of their systems.

AREAS FOR FURTHER STUDY

Certain recommendations in this report will require additional study, because factors affecting their implementation were not within our scope. Consequently, we believe the following areas should be studied in depth before any attempt is made to restructure Arizona's public education system.

Arizona Should Study Why Some States With Fewer Districts Than Arizona Have Significantly Different Administrative Costs Per Student

Before Arizona considers consolidation of school districts, it might be very useful to look at states with fewer districts and low administrative costs, such as Utah and Georgia. One explanation of the reason Utah has lower administrative costs compared to the other samples states is that Utah has a small number of districts, most of which are large and medium unified districts, rather than numerous small ones. Utah has 40 school districts, compared to Arizona's 238. Such a study should also include states with fewer districts than Arizona, but with higher administrative costs per student, such as Florida and Nevada.

A Study May Be Performed To Determine If Administrative Costs For School Districts In States With ESAs Are Lower Than In States Without ESAs

We have concluded that the use of services on a regional basis has resulted in cost savings, reduced duplication of services, and equalized educational opportunities. The impact on school district administrative costs of using regional services should be considered with regard to the consolidation of services and school districts.

APPENDIX A

SCOPE AND METHODOLOGY OF THE STUDY OF SCHOOL DISTRICT ADMINISTRATIVE COSTS

Comparisons of Administrative Costs Among Arizona's School Districts

The procedures followed to conduct the study of numbers of administrators and administrative costs within Arizona consisted of a number of steps.

- The terms used in the study were defined.
- The number of administrators and ratios of students to administrators were determined for all districts and compared among the various district categories.
- A sample of typical districts was determined.
- Administrative cost data and other information such as the districts' organizational structures were collected from the typical districts and compared among the various district categories.
- Findings and conclusions were developed.

In order to properly conduct the study and assure comparable results, it was essential to define terms to be used that would be applicable within Arizona and for comparisons with other states. How these terms were defined directly affected the results of our study. Auditor General staff spoke with representatives of the Arizona Department of Education, the National Center for Education Statistics, and Arizona school districts; and consulted with the advisory review committee, and derived definitions for administrators and administrative costs (both district and school level), sizes of districts, and location (whether urban or rural). (See Appendix B for definitions.)

Average daily attendance (ADA), locale, type, number of employees, and reported position codes of employees for all Arizona districts were obtained from the Arizona Department of Education.

- Average daily attendance was used as this is the attendance figure reported to the National Center for Education Statistics for comparisons to other states.
- Listings identifying which districts were isolated and the locale codes of each district were obtained from the Arizona Department of Education. Locale codes were used to determine whether a district was urban or rural.

- **Employee position codes were those reported to the Arizona Department of Education on the School District Employee Report.**
- **Fiscal year 1989-90 was chosen because it is the most recent year for which we were able to obtain national administrative numbers and costs from other states with which to compare our Arizona information.**

Excluded from this portion of our study were: all consortiums and special program districts operated through the county school superintendent; accommodation schools listed as having no employees other than the county school superintendent; and transporting districts, as transporting districts have no administrators.

Using the above information, the population of 213 districts was classified into categories by size, type, and location. Student population categories include super large, large, medium, small, and small isolated; type categories include unified, elementary, and high school; location categories include urban and rural. For a list of the 213 districts within the various categories, see Appendix C. In all, a total of 27 possible categories were defined, but districts existed in only 19 of those.

Using definitions provided by the National Center for Education Statistics, all school district employees were classified into eight categories according to their SDER codes and whether they were reported at the school or district level. These categories were:

District administrators
District administrative support staff
School administrators
School administrative support staff
Teachers
Aides, guidance counselors and librarians
Library support staff
Other support services staff

A problem with the classification of employees was noted. Most small districts having only one school did not report administrative or administrative support staff at both the district and school level. However, both levels of responsibilities are performed for all districts. Therefore, based upon a survey of ten of these districts, what percentage of time employees perform district- and school-level duties was determined.

For each of the 213 districts included in our population, the following six ratios were computed to determine the organizational structure patterns:

1. Students per district administrator
2. Students per district administrator and support staff
3. Students per school administrator
4. Students per school administrator and support staff
5. Students per total administrator (district and school level)
6. Students per total administrators and support staff (district and school levels)

Average ratios for each category of districts were computed for further analysis.

Statistical analysis was used to select the sample of districts, by calculating the mean, standard deviation, and standard error of the mean for ratios 1, 2, 3, and 6 for each category of districts.

Thirty districts were selected that had ratios the closest to the mean or average for that category, including from one to four districts from each category.

However, our selection of sample districts was limited in two respects.

- Only districts that in fiscal year 1989-90 maintained expenditure records by detailed function code specifically identifying certain administrative and other costs could be selected. Detailed function codes are presented but not required by the Uniform System of Financial Records. Several districts we considered for inclusion in our sample, especially small districts, did not maintain such detailed records.

- One district originally selected maintained detailed records, but not summarized for the year. Obtaining totals for the year required a commitment of our staff beyond the time constraints of the cost study.

The total ADA represented by the 30 sample districts was 188,974, or 33.9 percent of the total ADA for all Arizona school districts for fiscal year 1989-90.

For a complete listing of the 30 selected sample districts, see Appendix D.

The sample districts were selected from eleven counties. Districts in several counties had to be excluded because detailed function codes were not used in those counties.

Fiscal year 1989-90 detailed expenditure data was collected from each of the 30 sample districts for all operating funds containing administrative expenditures including the Maintenance and Operation, School Plant, Federal Projects, State Projects, and Indirect Costs Funds. All expenditure data was obtained directly from each district's expenditure records, Annual Financial Report, or county school superintendent's records.

On-site or telephone interviews of district and county school superintendent personnel were also conducted in order to complete a questionnaire for each sample district. We asked questions concerning the district's administrative structure, district and school responsibilities, charging of administrative salaries and other expenditures to appropriate account codes, and employee benefits the district provides for administrator positions.

Using the administrative cost data collected from the sample districts, administrative costs per student for each sample district at the district level and school level were calculated. All 30 districts were then combined into categories of size, type, and location. An average cost per student was determined for each size, type, and location category.

Comparisons of Administrative Costs of Arizona's School Districts to Other States

Our analysis included comparisons to national averages, as well as comparisons with eight selected states. Seven of the eight states selected had high population growth rates from 1980 to 1990 as did Arizona. The following list shows the states selected for our sample and their growth rates which were obtained from the U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States 1991.

State	Growth Rate
Nevada	50.1%
Arizona	34.8
Florida	32.7
California	25.7
Texas	19.4
Georgia	18.6
Utah	17.9
Washington	17.8
Missouri	4.1

Our selection of the sample states was limited to states that reported comparable and reliable administrative cost data for fiscal year 1989-90 according to the National Center for Education Statistics (NCES) and, in addition, we were able to obtain the data from the state.

Numbers and classifications of employees for the nation and other states were obtained from tables published by NCES. The National Public Education Financial Survey, containing cost information and ADA totals, was obtained directly from each of the selected states. This survey is required by NCES and is completed annually by all states, including Arizona. (Although we were able to obtain expenditure information from individual states, national expenditure information was not available for fiscal year 1989-90.)

To verify the reliability and comparability of the data among states, Auditor General staff contacted each of the sample states and NCES to discuss each state's method for calculating ADA, the types of expenditures reported in each of the cost categories, and the methods for classifying employees into different administrative categories used in our analysis. However, the conclusions reached in this report must be considered in view of the difficulties encountered regarding the comparability of the data as follows.

- During our interviews with the selected states and NCES, we noted that states vary in the method used to calculate ADA. For example, California does not exclude excused absences when reporting ADA, while Arizona and the other selected states do. Therefore, for proper comparability among states, California's ADA was adjusted based on discussions with the California Department of Education.

- Comparable cost data was also difficult to attain for the following reasons. First, detailed cost information for Arizona as a whole was not available. Therefore, it was necessary to calculate Arizona's costs per student based on the sum of the costs and respective ADA obtained from our 30 district sample for comparisons requiring detailed cost information. However, these per student ratios were compared to the per student ratios calculated from state totals for the selected states. Second, differences in reporting among the states were also encountered and adjustments were made as appropriate.

- For comparisons with other states, expenditures for desegregation and Federal programs were included in Arizona's total expenditures because such expenditures could not be separated from the expenditure totals reported by the other selected states.

- Difficulties were encountered regarding the comparability of employee classifications, due to differences among states in interpreting NCES instructions. For example, supervisors of classified employees were categorized as district or school administrators by some states and "other support services staff" by other states. However, for comparison purposes, Arizona's administrators were classified using the method of classification used by most of the selected states.

- Our detailed national comparisons focused on fiscal year 1989-90 which was the most recent year that national information was available.

Comparisons of Changes in Arizona's and Other States' School District Administrative Costs Over Time

Our analysis of trends in administrator staffing and administrative expenditures over a period of years was limited in several important respects.

- While district and school administrative expenditures from the 30 sample districts for fiscal year 1989-90 could be obtained through on-site visits, such detailed data could not be obtained for all Arizona districts for the number of years needed for a trend analysis because each district would have had to be visited, and because of the lack of expenditure detail maintained by many districts. Therefore, for the trend analysis in this section of the report, the State total of expenditures reported as district administration, function 100 of the Maintenance and Operation Fund was used, which we obtained from the Arizona Department of Education (ADE).

- ADE revised the number of administrators and other employees as reported to NCES for the years 1986-87 through 1989-90. (Revisions of prior years' data were unavailable.) Although ADE's 1989-90 figures differed from ours, to avoid any inconsistencies in trend analysis caused by this change, ADE's revised figures for analyses for those years were used.

- The number of administrators and other employees was obtained from NCES Digest of Education Statistics for the nation and sample states.

APPENDIX B

DEFINITIONS USED IN THE STUDY OF SCHOOL DISTRICT ADMINISTRATIVE COSTS

Average Daily Attendance (ADA) - Actual average daily attendance of students through the first one hundred days in session.

Administrative Costs

District Administrative Costs - Expenditures for activities concerned with establishing and administering policies for operating the district, activities associated with the overall general administration of the entire district, activities concerned with the business and fiscal services of the district, and other districtwide activities, which support instructional and support services programs, such as data processing, evaluating and planning. The Uniform System of Financial Records (USFR) chart of accounts function code classifications included are Governing Board (110), Superintendent's Office (120), Business and Fiscal Services (130), Educational Services (140), and Data Processing (450). Salaries and benefits of superintendents, associate superintendents, assistant superintendents, business managers, and their staffs are major components of district administrative costs.

We only included operating expenditures because capital expenditures for purchases of furniture or equipment may fluctuate greatly among years and because the current USFR chart of accounts does not require the use of function codes for capital expenditures, thereby making such data uncollectible at the district administration level. Additionally, Federal projects and desegregation district administrative expenditures were excluded.

School Administrative Costs - Expenditures for activities concerned with overall administration of a school. USFR chart of accounts function code classification included is Principal's Office (310).

Salaries and benefits of principals, assistant principals, and their staffs comprise a major portion of school administrative costs. Included are operating expenditures only. Capital, Federal projects, and desegregation school administrative expenditures have not been included.

Administrators

District Administrators - Employees who direct and manage the operations of the district, including superintendents (School District Employee Report code 100), associate and assistant superintendents (102), and others having districtwide responsibilities, such as business managers (013 and 111), personnel directors (032 and 106), administrative assistants (101), curriculum coordinators (105), supervisors (107), vocational educational administrators (110), other administrators (109), and principals (103) and head teachers (108) of small districts having only one school.

District Administrative Support Staff - Employees who provide direct support to district administrators, including clerical and secretarial staff (018), accountants (001), buyers (014), bookkeepers (010), attendance officers (009), personnel assistants (042), printers (034), and research, evaluators/statisticians (035).

School Administrators - Employees who direct and manage the operations of a particular school, including principals (103), assistant principals (104), and others who supervise school operations or coordinate school instructional activities such as bookstore managers (011).

School Administrative Support Staff - Employees who provide direct support to administrators of a particular school, including clerical and secretarial staff (018), attendance officers (009), and cashiers (017).

District Location

Rural District - A district located in a small town with a population of less than 25,000 but not within a metropolitan area, or a place with a population of less than 2,500.

Urban District - A district located in a metropolitan area that has a city of at least 50,000 population, or a district located in a city or town not within a metropolitan area but with a population greater than 25,000.

District Size

Super Large District - A district with 40,000 or more students.

Large District - A district with between 5,000 and 40,000 students.

Medium District - A district with 5,000 or fewer students, but not meeting the definition of a small or small isolated district.

Small District - As defined by Arizona Revised Statutes (A.R.S.) §15-901.B.24, a district with fewer than 600 students in either high school or elementary grades, but which is not classified as isolated.

Small Isolated District - As defined by A.R.S. §15-901.B.23, a district with fewer than 600 students in either high school or elementary grades, and every school in the district is located more than 30 miles (or 15 miles if road conditions and terrain are hazardous) from a school of the same grades in another district.

District Type

Elementary District - A school district offering instruction in kindergarten and grades one through eight. This district type includes accommodation school districts offering instruction in the same grades.

High School District - A school district offering instruction in grades nine through twelve.

Unified District - A school district offering instruction in kindergarten and grades one through twelve. This district type includes accommodation school districts offering instruction in the same grades.

APPENDIX C

DATABASE OF 213 ARIZONA DISTRICTS ANALYZED IN THE STUDY OF SCHOOL DISTRICT ADMINISTRATIVE COSTS (1)

DISTRICT	ADA (2)	NUMBER OF DIST. ADMIN.	NUMBER OF DIST. SUPPORT	NUMBER OF SCHOOL ADMIN.	NUMBER OF SCHOOL SUPPORT	STUDENTS PER DISTRICT ADMIN.	STUDENTS PER DISTRICT ADMIN. & SUPPORT	STUDENTS PER SCHOOL ADMIN.	STUDENTS PER SCHOOL ADMIN. & SUPPORT
SUPER LARGE UNIFIED URBAN									
MESA UNIFIED #4	55799	64.5	50.8	129.5	388.3	865	484	431	108
TUCSON UNIFIED #1	49229	156.6	353.8	156.5	276.4	314	96	315	114
LARGE UNIFIED URBAN									
SUNNYSIDE UNIFIED #12	11248	20.5	13.0	48.5	125.3	549	336	232	65
AMPHITHEATER UNIFIED #10	11566	32.9	55.5	33.3	59.2	352	131	347	125
DEER VALLEY UNIFIED #97	13826	15.5	44.3	45.3	72.0	892	231	306	118
SCOTTSDALE UNIFIED #48	17350	27.0	71.0	42.0	94.6	643	177	413	127
SIERRA VISTA UNIFIED #68	5673	16.0	28.0	21.0	27.0	355	129	270	118
CHANDLER UNIFIED #80	9440	10.0	35.0	21.0	74.0	944	210	450	99
PARADISE VALLEY UNIFIED #69	23603	29.5	78.4	46.0	119.8	800	219	513	142
GILBERT UNIFIED #41	8979	22.5	30.0	16.0	39.5	399	171	561	162
PEORIA UNIFIED #11	18029	23.5	15.5	56.8	114.5	767	462	318	105
FLAGSTAFF UNIFIED #1	10256	22.8	15.2	31.8	68.5	451	270	323	102
LARGE HIGH URBAN									
YUMA UNION HIGH #70	5312	7.0	21.0	15.0	45.0	759	190	354	89
GLENDALE UNION HIGH #205	11683	18.0	9.0	55.4	110.3	649	433	211	71
TEMPE UNION HIGH #213	7618	16.0	22.5	24.0	41.0	476	198	317	117
PHOENIX UNION HIGH #210	15671	53.0	57.0	70.0	154.5	296	142	224	70
LARGE ELEMENTARY URBAN									
ALHAMBRA ELEMENTARY #68	6766	11.0	7.0	24.5	43.3	615	376	276	100
CARTWRIGHT ELEMENTARY #83	12356	15.0	43.0	44.3	37.5	824	213	279	151
YUMA ELEMENTARY #1	6809	13.3	4.0	27.0	42.8	514	395	252	98
ROOSEVELT ELEMENTARY #66	9133	23.0	43.3	52.0	46.8	397	138	176	92
PHOENIX ELEMENTARY #01	6616	14.0	53.8	34.8	27.4	473	98	190	106
TEMPE ELEMENTARY #3	11014	21.0	66.0	35.6	52.1	524	127	310	126
WASHINGTON ELEMENTARY #6	19749	27.0	59.1	41.0	38.0	731	229	482	250
KYRENE ELEMENTARY #28	8457	11.0	8.0	18.0	56.3	769	445	470	114
GLENDALE ELEMENTARY #40	7714	13.6	23.5	30.0	30.9	566	208	257	127
LARGE UNIFIED RURAL									
MARANA UNIFIED #6	6529	7.3	27.1	20.5	25.0	901	190	318	144
NOGALES UNIFIED #1	5021	8.0	14.8	12.0	29.0	628	221	418	122
MEDIUM UNIFIED URBAN									
APACHE JUNCTION UNIFIED #43	3417	13.0	15.4	9.0	16.0	263	121	380	137

DISTRICT	ADA (2)	NUMBER OF DIST. ADMIN.	NUMBER OF DIST. SUPPORT	NUMBER OF SCHOOL ADMIN.	NUMBER OF SCHOOL SUPPORT	STUDENTS PER DISTRICT ADMIN.	STUDENTS PER DISTRICT ADMIN. & SUPPORT	STUDENTS PER SCHOOL ADMIN.	STUDENTS PER SCHOOL ADMIN. & SUPPORT
PRESCOTT UNIFIED #1	4343	9.0	6.0	12.5	46.8	483	290	347	73
FLOWING WELLS UNIFIED #8	4371	12.0	19.5	18.0	21.3	364	139	243	111
CATALINA FOOTHILLS UNIFIED #16	2829	7.3	8.5	4.3	9.8	390	180	653	201
OYSART UNIFIED #89	3363	9.0	17.3	14.5	18.8	374	128	232	101
MEDIUM HIGH URBAN									
TOLLESON UNION HIGH #214	2194	8.6	5.3	7.1	18.9	255	158	309	84
MEDIUM ELEMENTARY URBAN									
FT. HUACHUCA ACCOMMODATION	1387	3.0	4.0	3.0	4.0	462	198	462	198
FOWLER ELEMENTARY #45	1054	2.0	1.0	3.0	3.0	527	351	351	96
PENDERGAST ELEMENTARY #92	3475	8.0	22.3	12.0	10.9	434	115	290	152
MURPHY ELEMENTARY #21	2167	8.0	16.5	12.0	9.0	271	88	181	103
CRANE ELEMENTARY #13	4127	11.0	20.0	14.0	19.0	375	133	295	125
TOLLESON ELEMENTARY #17	790	5.0	4.0	2.3	4.0	158	88	351	127
ISAAC ELEMENTARY #5	4968	9.0	18.3	14.5	9.3	552	182	343	209
BALSZ ELEMENTARY #31	1914	5.0	6.0	8.0	5.0	383	174	239	147
LAVEEN ELEMENTARY #59	1587	6.5	6.0	4.0	8.8	244	127	397	124
MADISON ELEMENTARY #38	3295	9.0	20.5	15.5	13.5	366	112	213	114
CREIGHTON ELEMENTARY #14	4360	13.0	18.3	16.0	21.8	335	140	273	116
OSBORN ELEMENTARY #8	2613	3.0	12.5	11.0	8.0	871	169	238	138
WILSON ELEMENTARY #7	649	3.0	5.0	2.0	4.0	216	81	325	108
MEDIUM UNIFIED RURAL									
PAGE UNIFIED #8	2912	9.0	12.0	8.0	14.3	324	139	364	131
TUBA CITY UNIFIED #15	2449	11.0	3.0	10.8	37.0	223	175	228	51
SAFFORD UNIFIED #1	2305	5.5	5.8	5.5	12.0	423	206	423	132
DOUGLAS UNIFIED #27	3841	6.0	10.0	9.0	19.5	640	240	427	135
HOLBROOK UNIFIED #3	1669	4.0	8.0	5.0	8.5	417	139	334	124
LAKE HAVASU UNIFIED #1	3242	5.8	10.5	10.0	18.5	564	200	324	114
SNOWFLAKE UNIFIED #5	2234	4.0	7.0	8.8	13.3	558	203	255	102
WINSLOW UNIFIED #1	2191	5.0	1.0	6.0	15.0	438	365	365	104
KAYENTA UNIFIED #27	2211	9.0	15.0	6.0	15.3	246	92	368	104
WINDOW ROCK UNIFIED #8	2731	14.0	24.3	8.0	13.0	195	71	341	130
CHINLE UNIFIED #24	3376	17.0	25.0	12.0	15.0	199	80	281	125
MEDIUM HIGH RURAL									
CASA GRANDE UNION HIGH #82	1633	5.0	8.0	3.0	20.0	327	126	544	71
MINGUS UNION HIGH #4	1026	2.5	5.4	4.3	3.6	410	130	241	131
BUCKEYE UNION HIGH #201	674	3.8	4.2	3.0	2.8	245	97	225	116
COLORADO RIVER UNION HIGH #2	965	3.0	6.3	4.0	4.2	322	104	241	118
MOHAVE UNION HIGH #30	1314	2.0	2.0	4.0	8.0	657	329	329	110
AGUA FRIA UNION HIGH #216	1379	6.0	10.8	4.0	7.2	230	82	345	123

DISTRICT	ADA (2)	NUMBER OF DIST. ADMIN.	DIST. SUPPORT	SCHOOL ADMIN.	SCHOOL SUPPORT	STUDENTS PER DISTRICT ADMIN.	DISTRICT ADMIN. & SUPPORT	SCHOOL ADMIN.	SCHOOL ADMIN. & SUPPORT
MEDIUM ELEMENTARY RURAL									
CASA GRANDE ELEMENTARY #4	3929	9.0	22.0	9.0	15.8	437	127	437	159
ELOY ELEMENTARY #11	1097	3.0	2.5	3.0	2.0	366	199	366	219
SACATON ELEMENTARY #18	668	5.0	5.0	2.0	2.0	134	67	334	167
BULLHEAD CITY ELEMENTARY #15	1842	4.0	4.0	2.5	8.3	460	230	737	171
MOHAVE VALLEY ELEMENTARY #16	1018	2.5	4.8	3.0	3.2	407	140	339	164
GADSDEN ELEMENTARY #32	1000	3.0	4.2	2.0	2.8	333	139	500	208
BENSON ELEMENTARY #9	689	1.2	2.7	2.0	1.8	599	179	345	181
SOMERTON ELEMENTARY #11	1542	7.0	4.0	5.0	13.5	220	140	308	83
KINGMAN ELEMENTARY #4	3525	6.5	8.8	8.0	14.0	542	231	441	160
LIBERTY ELEMENTARY #25	704	5.0	3.6	2.0	2.4	141	81	352	159
LITTLETON ELEMENTARY #65	1129	7.0	5.0	3.0	7.5	161	94	376	108
AVONDALE ELEMENTARY #44	2329	9.5	4.5	8.0	15.0	245	166	291	101
BUCKEYE ELEMENTARY #33	972	3.0	2.0	2.0	2.0	324	194	486	243
COTTONWOOD-OAK CREEK ELEM #6	2359	4.0	7.5	5.0	5.0	590	205	472	236
LITCHFIELD ELEMENTARY #79	1289	5.0	6.0	4.0	5.0	258	117	322	129
SMALL UNIFIED URBAN									
WILLIAMS AFB ACCOMMODATION	515	1.3	1.0	1.0	5.0	412	229	515	86
TANQUE VERDE UNIFIED #13	1418	5.0	3.8	6.3	5.5	284	162	227	121
SMALL ELEMENTARY URBAN									
HORSE MESA ACCOMMODATION #509	201	0.8	1.8	0.5	1.2	268	79	403	118
ZIMMERMAN ACCOMMODATION	13	0.3	0.0	0.2	0.0	44	44	66	66
RIVERSIDE ELEMENTARY #2	162	1.5	1.5	1.0	1.0	108	54	162	81
PALO VERDE ELEMENTARY #49	195	2.2	0.6	1.4	0.4	90	71	135	106
UNION ELEMENTARY #62	70	1.8	1.1	0.3	0.7	40	25	282	74
SMALL UNIFIED RURAL									
PIMA UNIFIED #6	617	1.8	2.0	4.0	2.3	352	164	154	99
THATCHER UNIFIED #4	1292	3.0	2.8	5.0	5.3	431	225	258	126
FT THOMAS UNIFIED #7	400	2.0	1.8	2.0	1.2	200	105	200	125
FOUNTAIN HILLS UNIFIED #98	1220	2.7	5.0	2.0	4.0	459	159	610	203
CLIFTON UNIFIED #3	433	4.0	2.0	2.0	2.5	108	72	217	96
HAYDEN-WINKELMAN UNIFIED #41	481	2.3	2.0	1.5	4.5	214	113	321	80
MORENCI UNIFIED #18	972	2.5	4.0	3.8	3.0	390	150	259	144
WILLCOX UNIFIED #13	1231	5.0	6.0	3.0	9.0	246	112	411	103
WILLIAMS UNIFIED #2	568	3.0	0.8	2.0	5.5	189	152	284	76
SAN CARLOS UNIFIED #20	1099	3.0	9.0	1.0	2.0	366	92	1099	366
QUEEN CREEK UNIFIED #95	721	6.0	3.0	3.0	5.0	120	80	240	90
GLOBE UNIFIED #1	1547	5.5	6.1	6.0	6.0	281	133	258	129
CAVE CREEK UNIFIED #93	1353	5.0	7.8	9.5	7.3	271	106	142	81
BISBEE UNIFIED #2	1148	5.0	6.0	6.0	4.0	230	104	191	115
TOMBSTONE UNIFIED #1	908	3.5	3.5	3.5	4.7	259	130	259	111
MIAMI UNIFIED #40	1705	1.5	10.0	5.0	8.0	1137	148	341	131
BOWIE UNIFIED #14	107	0.9	2.5	0.6	0.3	119	31	178	126
SAN SIMON UNIFIED #18	85	1.2	1.1	0.8	0.7	71	38	106	57

DISTRICT	ADA (2)	NUMBER OF DIST. ADMIN.	DIST. SUPPORT	SCHOOL ADMIN.	SCHOOL SUPPORT	STUDENTS PER DISTRICT ADMIN.	DISTRICT ADMIN. & SUPPORT	SCHOOL ADMIN.	SCHOOL ADMIN. & SUPPORT
CHINO VALLEY UNIFIED #51	1217	6.0	5.0	4.0	6.5	203	111	304	116
HUMBOLDT UNIFIED #22	2304	6.0	7.0	6.0	8.0	384	177	384	165
SAHUARITA UNIFIED #30	1285	5.0	6.0	4.1	8.8	257	117	313	100
MAYER UNIFIED #43	425	1.8	2.0	1.3	3.3	243	113	340	94
RAY UNIFIED #3	1026	3.0	2.0	3.0	4.5	342	205	342	137
BLUE RIDGE UNIFIED #32	1554	3.5	4.0	5.0	8.0	444	207	311	120
MARICOPA UNIFIED #20	785	4.0	4.0	4.0	7.0	196	98	196	71
ST DAVID UNIFIED #21	393	3.0	2.1	1.0	1.4	131	77	393	164
SANTA CRUZ VALLEY UNIFIED #35	1065	3.8	3.6	3.0	2.5	280	143	355	194
SELIGMAN UNIFIED #40	135	1.2	0.6	0.8	0.4	112	75	168	112
PINON UNIFIED #4	784	5.0	6.6	0.5	1.0	157	68	1569	523
SHOW LOW UNIFIED #10	1726	7.0	6.5	5.3	7.5	247	128	329	135
JOSEPH CITY UNIFIED #2	385	1.0	1.0	2.0	2.5	385	193	193	86
COOLIDGE UNIFIED #21	2260	7.0	8.3	8.0	17.0	323	148	282	90
ASH FORK UNIFIED #31	152	1.0	2.0	0.5	1.0	152	51	304	101
FLORENCE UNIFIED #1	964	2.0	4.0	3.0	6.5	482	161	321	102
CAMP VERDE UNIFIED #28	1077	4.0	1.0	4.0	7.5	269	215	269	94
SMALL HIGH RURAL									
BENSON UNION HIGH #9	323	1.9	2.9	1.0	1.9	175	69	323	112
PATAGONIA UNION HIGH #20	88	1.8	1.2	1.2	0.8	49	29	73	44
VALLEY UNION HIGH #22	133	1.8	0.6	1.2	0.4	74	56	111	83
SANTA CRUZ VALLEY UNION HIGH	432	4.9	3.9	0.5	2.6	89	49	863	139
SMALL ELEMENTARY RURAL									
HACKBERRY ELEMENTARY #3	30	0.6	0.0	0.4	0.0	50	50	76	76
PALOMA ELEMENTARY #94	105	0.9	0.9	0.6	0.6	116	58	175	87
SENTINEL ELEMENTARY #71	44	1.2	0.6	0.8	0.4	37	25	56	37
AGUILA ELEMENTARY #63	127	0.2	0.6	0.1	0.4	847	169	1271	254
VALENTINE ELEMENTARY #22	48	0.6	0.3	0.4	0.2	81	54	121	81
HIGLEY ELEMENTARY #60	246	1.5	0.9	1.0	0.6	164	102	246	154
MORRISTOWN ELEMENTARY #75	77	1.2	0.0	0.8	0.0	64	64	97	97
HADABURG ELEMENTARY #81	445	3.0	2.9	1.0	1.9	148	76	445	154
VERNON ELEMENTARY #9	58	0.2	0.2	0.1	0.1	390	195	585	293
MOBILE ELEMENTARY #66	17	0.6	0.6	0.4	0.4	28	14	42	21
MCNARY ELEMENTARY #23	74	1.5	0.0	1.0	0.0	50	50	75	75
RUTH FISHER ELEMENTARY #90	275	3.0	0.0	1.0	0.0	92	92	275	275
CONCHO ELEMENTARY #6	214	1.1	0.6	0.7	0.4	203	129	305	194
PEACH SPRINGS ELEMENTARY #8	182	1.0	1.2	1.0	0.8	182	83	182	101
MC NEAL ELEMENTARY #55	49	0.2	0.5	0.1	0.3	327	82	491	123
POMERENE ELEMENTARY #64	99	0.8	0.5	0.3	0.3	132	82	396	180
PEARCE ELEMENTARY #22	155	1.5	0.6	1.0	0.4	104	74	157	112
ASH CREEK ELEMENTARY #53	39	1.2	0.6	0.8	0.4	33	22	49	33
ELFRIDA ELEMENTARY #12	166	1.0	0.6	1.0	0.4	166	104	166	118
PALOMINAS ELEMENTARY #49	628	5.0	1.2	5.0	0.8	126	101	628	349
DOUBLE ADOBE ELEMENTARY #45	76	0.2	0.6	0.1	0.4	510	102	765	153
YUCCA ELEMENTARY #13	18	0.3	0.0	0.2	0.0	61	61	91	91
MARY C O' BRIEN ACCOMMODATION	55	1.2	0.6	0.8	0.4	46	31	69	46
PATAGONIA ELEMENTARY #6	168	1.8	0.6	1.2	0.4	93	70	140	105
SALOME CONSOL. ELEMENTARY #30	99	1.6	0.6	0.4	0.4	62	45	247	124

DISTRICT	ADA (2)	NUMBER OF DIST. ADMIN.	NUMBER OF DIST. SUPPORT	NUMBER OF SCHOOL ADMIN.	NUMBER OF SCHOOL SUPPORT	STUDENTS PER DISTRICT ADMIN.	STUDENTS PER DISTRICT ADMIN. & SUPPORT	STUDENTS PER SCHOOL ADMIN.	STUDENTS PER SCHOOL ADMIN. & SUPPORT
MOHAWK VALLEY ELEMENTARY #17	233	1.0	1.5	1.0	1.0	233	93	233	116
TOLTEC ELEMENTARY #22	395	2.0	1.5	1.0	1.0	197	113	395	197
WENDEN ELEMENTARY #19	82	0.9	0.5	0.1	0.3	91	61	819	205
BEAVER CREEK ELEMENTARY #26	245	0.6	1.1	0.4	0.7	409	149	613	223
VAIL ELEMENTARY #20	659	4.0	2.0	1.0	2.6	165	110	659	185
STANFIELD ELEMENTARY #24	352	3.0	2.4	0.4	1.6	117	65	881	176
CONTINENTAL ELEMENTARY #39	229	1.0	0.6	1.0	0.4	229	143	229	164
PICACHO ELEMENTARY #33	159	2.0	0.6	1.0	0.4	80	61	159	114
ARLINGTON ELEMENTARY #47	100	1.5	0.3	1.0	0.2	67	56	100	84
SOLOMONVILLE ELEMENTARY #5	271	1.8	0.9	1.2	0.6	151	100	226	151
ALTAR VALLEY ELEMENTARY #51	602	1.8	2.4	1.2	1.6	334	143	501	215
HILLSIDE ELEMENTARY #35	31	0.6	0.0	0.4	0.0	52	52	79	79
CANON ELEMENTARY #50	184	0.6	1.6	0.4	1.0	307	85	461	128
YARNELL ELEMENTARY #52	89	0.5	0.6	1.0	0.4	178	84	89	65
CLARKDALE-JEROME ELEMENTARY #3	341	1.4	0.6	0.9	0.4	253	175	379	262
COCHISE ELEMENTARY #26	57	2.0	0.0	1.0	0.0	28	28	57	57
HYDER ELEMENTARY #16	190	1.5	0.6	1.0	0.4	127	90	190	136
ORACLE ELEMENTARY #2	706	3.0	3.0	2.0	2.0	235	118	353	176
WELLTON ELEMENTARY #24	382	2.0	1.2	1.0	0.8	191	119	382	212
RED ROCK ELEMENTARY #5	51	1.5	0.0	0.3	0.0	34	34	206	206
KIRKLAND ELEMENTARY #23	49	1.1	0.2	0.4	0.1	45	39	123	98
QUARTZSITE ELEMENTARY #4	280	2.0	1.2	1.0	0.8	140	88	280	156
J. O. COMBS ELEMENTARY #44	306	1.2	1.4	0.8	0.9	255	120	382	180
BOUSE ELEMENTARY #26	28	0.9	0.6	0.1	0.4	31	18	276	55
NACO ELEMENTARY #23	302	0.6	1.2	0.4	0.8	503	168	754	251
SANTA CRUZ ELEMENTARY #28	118	0.6	0.6	0.4	0.4	197	98	295	147
SMALL ISOLATED UNIFIED RURAL									
DUNCAN UNIFIED #2	521	3.3	0.8	2.3	5.8	160	130	232	65
CEDAR UNIFIED #25	497	6.0	3.0	1.0	4.0	83	55	497	99
WHITERIVER UNIFIED #20	1644	6.0	11.0	7.5	10.5	274	97	219	91
MAMMOTH-SAN MANUEL UNIFIED #8	1687	7.0	10.4	6.0	7.3	241	97	281	127
GILA BEND UNIFIED #24	597	3.0	4.0	2.0	2.0	199	85	298	149
HEBER-OVERGAARD UNIFIED #6	378	3.0	1.8	1.5	1.2	126	79	252	140
WICKENBURG UNIFIED #9	787	4.3	4.0	4.0	5.5	185	95	197	83
BAGDAD UNIFIED #20	534	2.0	1.0	3.0	4.0	267	178	178	76
SUPERIOR UNIFIED #15	691	2.5	4.8	4.0	7.3	276	95	173	61
SANDERS UNIFIED #18	810	7.5	7.0	4.0	4.0	108	56	203	101
GANADO UNIFIED #20	1650	6.0	12.5	6.0	13.0	275	89	275	87
COLORADO CITY UNIFIED #14	816	3.3	5.1	2.0	3.4	251	98	408	151
RED MESA UNIFIED #27	701	5.5	10.0	3.8	6.0	127	45	187	72
ST JOHNS UNIFIED #1	1228	6.0	5.5	4.0	5.0	205	107	307	136
INDIAN OASIS-B UNIFIED #40	979	8.0	6.0	3.0	10.0	122	70	326	75
ROUND VALLEY UNIFIED #10	1800	6.0	6.0	5.0	7.0	300	150	360	150
AJO UNIFIED #15	552	1.0	3.0	2.5	3.0	552	138	221	100
PAYSON UNIFIED #10	1566	4.0	5.5	5.0	10.5	392	165	313	101
PARKER UNIFIED #27	1891	5.5	11.5	9.0	11.0	344	111	210	95
GRAND CANYON UNIFIED #4	188	1.8	1.2	1.2	0.8	105	63	157	94
FREDONIA-MOCCASIN UNIFIED #6	412	2.8	1.0	1.0	1.8	150	110	412	150

DISTRICT	ADA (2)	NUMBER OF DIST. ADMIN.	NUMBER OF DIST. SUPPORT	NUMBER OF SCHOOL ADMIN.	NUMBER OF SCHOOL SUPPORT	STUDENTS PER DISTRICT ADMIN.	STUDENTS PER DISTRICT ADMIN. & SUPPORT	STUDENTS PER SCHOOL ADMIN.	STUDENTS PER SCHOOL ADMIN. & SUPPORT
SMALL ISOLATED HIGH RURAL									
ANTELOPE UNION HIGH #50	295	3.0	2.1	2.5	1.4	98	58	118	76
BICENTENNIAL UNION HIGH #76	100	1.5	1.2	1.0	0.8	67	37	100	56
SMALL ISOLATED ELEMENTARY RURAL									
PINE ELEMENTARY #12	297	1.8	0.6	1.2	0.4	165	124	247	186
YOUNG ELEMENTARY #5	70	1.2	0.9	0.8	0.6	58	33	87	50
CHLORIDE ELEMENTARY #11	135	1.0	0.6	1.0	0.4	135	84	135	96
ALPINE ELEMENTARY #7	67	1.5	0.0	1.0	0.0	45	45	67	67
APACHE ELEMENTARY #42	23	0.6	0.3	0.4	0.2	38	26	58	38
BONITA ELEMENTARY #16	95	0.6	0.6	0.4	0.4	159	80	239	119
TONTO BASIN ELEMENTARY #33	57	0.0	0.6	0.0	0.4	0	94	0	142
OWENS-WHITNEY ELEMENTARY #6	55	1.2	0.6	0.1	0.4	48	32	554	111
CROWN KING ELEMENTARY #41	11	0.3	0.0	0.2	0.0	34	34	54	54
MAINE CONSOL. ELEMENTARY #10	75	1.5	0.5	1.0	0.3	50	38	75	57
BLUE ELEMENTARY #22	9	0.6	0.0	0.4	0.0	15	15	22	22
SAN FERNANDO ELEMENTARY #35	12	0.3	0.0	0.2	0.0	40	40	61	61
EAGLE ELEMENTARY #45	13	0.6	0.0	0.4	0.0	22	22	32	32
SONOITA ELEMENTARY #25	67	0.6	0.7	0.4	0.5	112	51	169	77
LITTLEFIELD ELEMENTARY #9	90	0.6	0.6	0.4	0.4	150	75	225	112

(1) All data is for fiscal year 1989-90. All figures are rounded.

(2) Average Daily Attendance

Source: Compiled from data provided by the Arizona Department of Education.

APPENDIX D: SAMPLE DISTRICTS SELECTED FOR THE STUDY OF SCHOOL DISTRICT ADMINISTRATIVE COSTS[1]

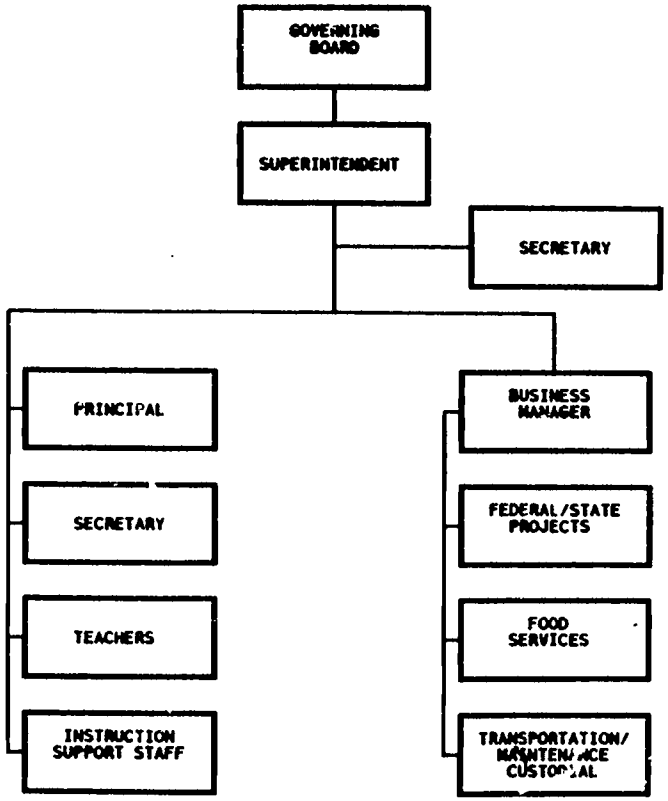
DISTRICT CATEGORY	DISTRICT	COUNTY	ADA[2]	DISTRICT ADMIN. COST	SCHOOL ADMIN. COST	TOTAL ADMIN. COST	TOTAL ADMIN. COST PER STUDENT
1. Super Large, Unified, Urban	Mesa USD	Maricopa	55,799	$ 7,166,132	$12,320,722	$19,486,854	$349
2. Super Large, Unified, Urban	Tucson USD	Pima	49,229	10,191,390	12,124,883	22,316,273	453
3. Large, Unified, Urban	Flagstaff USD	Coconino	10,256	$1,153,257	$2,154,097	$3,307,354	$322
4. Large, Unified, Urban	Deer Valley USD	Maricopa	13,826	2,243,926	2,684,181	4,928,107	356
5. Large, Unified, Rural	Nogales USD	Santa Cruz	5,021	1,090,080	1,232,143	2,322,223	463
6. Large, High, Urban	Tempe UHSD	Maricopa	7,618	1,474,499	1,751,608	3,226,107	423
7. Large, Elementary, Urban	Tempe ESD	Maricopa	11,014	2,294,949	2,234,488	4,529,437	411
8. Medium, Unified, Urban	Flowing Wells USD	Pima	4,371	$763,939	$1,370,547	$2,134,486	$488
9. Medium, Unified, Rural	Snowflake USD	Navajo	2,234	237,755	419,416	657,171	294
10. Medium, Unified, Rural	Page USD	Coconino	2,912	836,706	613,474	1,450,180	498
11. Medium, High, Urban	Tolleson UHSD	Maricopa	2,194	468,860	456,223	925,083	422
12. Medium, High, Rural	Colorado River UHSD	Mohave	965	242,282	569,199	811,481	841
13. Medium, Elementary, Urban	Crane ESD	Yuma	4,127	807,889	811,427	1,619,316	392
14. Medium, Elementary, Urban	Creighton ESD	Maricopa	4,360	803,313	719,136	1,522,449	349
15. Medium, Elementary, Rural	Avondale ESD	Maricopa	2,329	529,884	632,809	1,162,693	499
16. Medium, Elementary, Rural	Bullhead City ESD	Mohave	1,842	307,921	205,908	513,829	279
17. Small, Unified, Urban	Tanque Verde USD	Pima	1,418	$340,462	$321,754	$662,216	$467
18. Small, Unified, Rural	Globe USD	Gila	1,547	271,748	460,174	731,922	473
19. Small, Unified, Rural	Fort Thomas USD	Graham	400	156,857	127,438	284,295	711
20. Small, Unified, Rural	Show Low USD	Navajo	1,726	291,904	395,105	687,009	398
21. Small, Unified, Isolated	Mammoth-San Manuel USD	Pinal	1,687	517,441	408,366	925,807	549
22. Small, Unified, Isolated	Parker USD	La Paz	1,891	509,215	454,802	964,017	510
23. Small, High, Rural	Santa Cruz Valley UHSD	Pinal	432	167,159	82,785	249,944	579
24. Small, High, Isolated	Antelope UHSD	Yuma	295	125,139	80,634	205,773	698
25. Small, Elementary, Urban	Riverside ESD	Maricopa	162	70,940	81,481	152,421	941
26. Small, Elementary, Rural	Higley ESD	Maricopa	246	54,690	54,690	109,380	445
27. Small, Elementary, Rural	Nadaburg ESD	Maricopa	445	94,398	94,568	188,966	425
28. Small, Elementary, Rural	Solomonville ESD	Graham	271	52,941	52,941	105,882	391
29. Small, Elementary, Rural	Mohawk ESD	Yuma	233	73,493	52,313	125,806	540
30. Small, Elementary, Isolated	Owens-Whitney ESD	Mohave	55	18,471	18,471	36,942	672

[1] Data is for fiscal year 1989-90.

[2] Average Daily Attendance

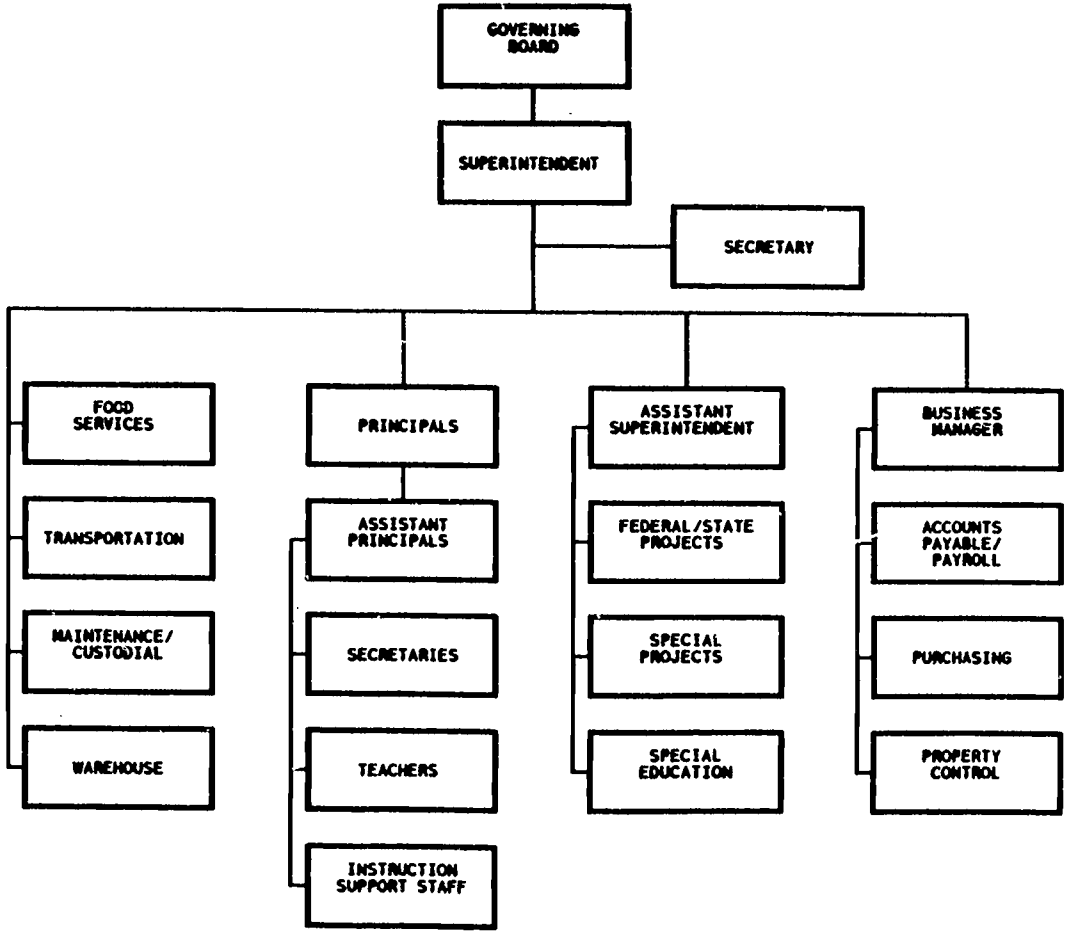
Source: Compiled from the 30 sample districts.

APPENDIX E-1
SAMPLE ADMINISTRATIVE ORGANIZATIONAL STRUCTURE
SMALL DISTRICTS UNDER 600 ADA



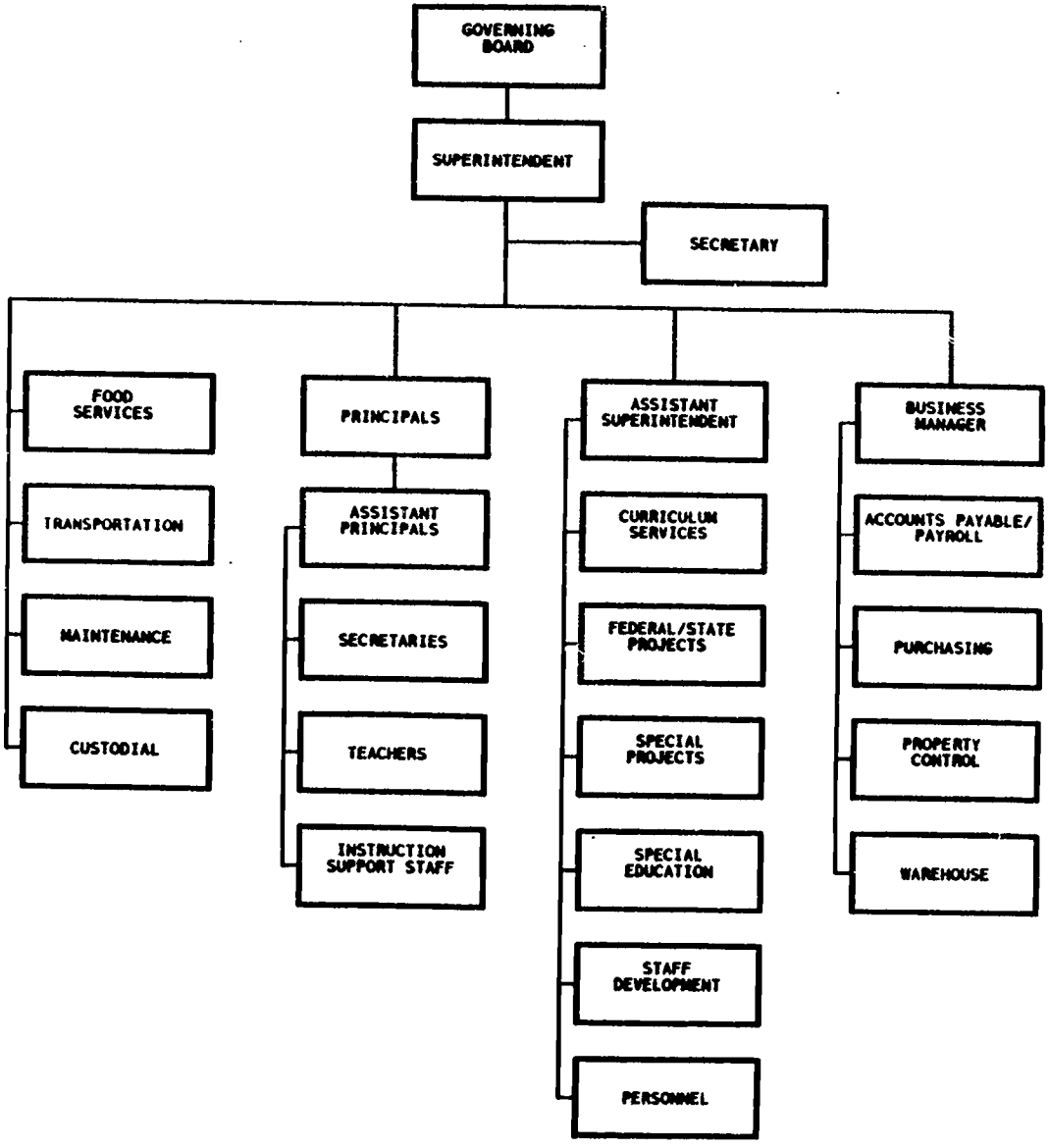
Source: Analysis of the sample small districts with less than 600 average daily attendance (ADA).

APPENDIX E-2
SAMPLE ADMINISTRATIVE ORGANIZATIONAL STRUCTURE
SMALL DISTRICTS 600 ADA OR MORE



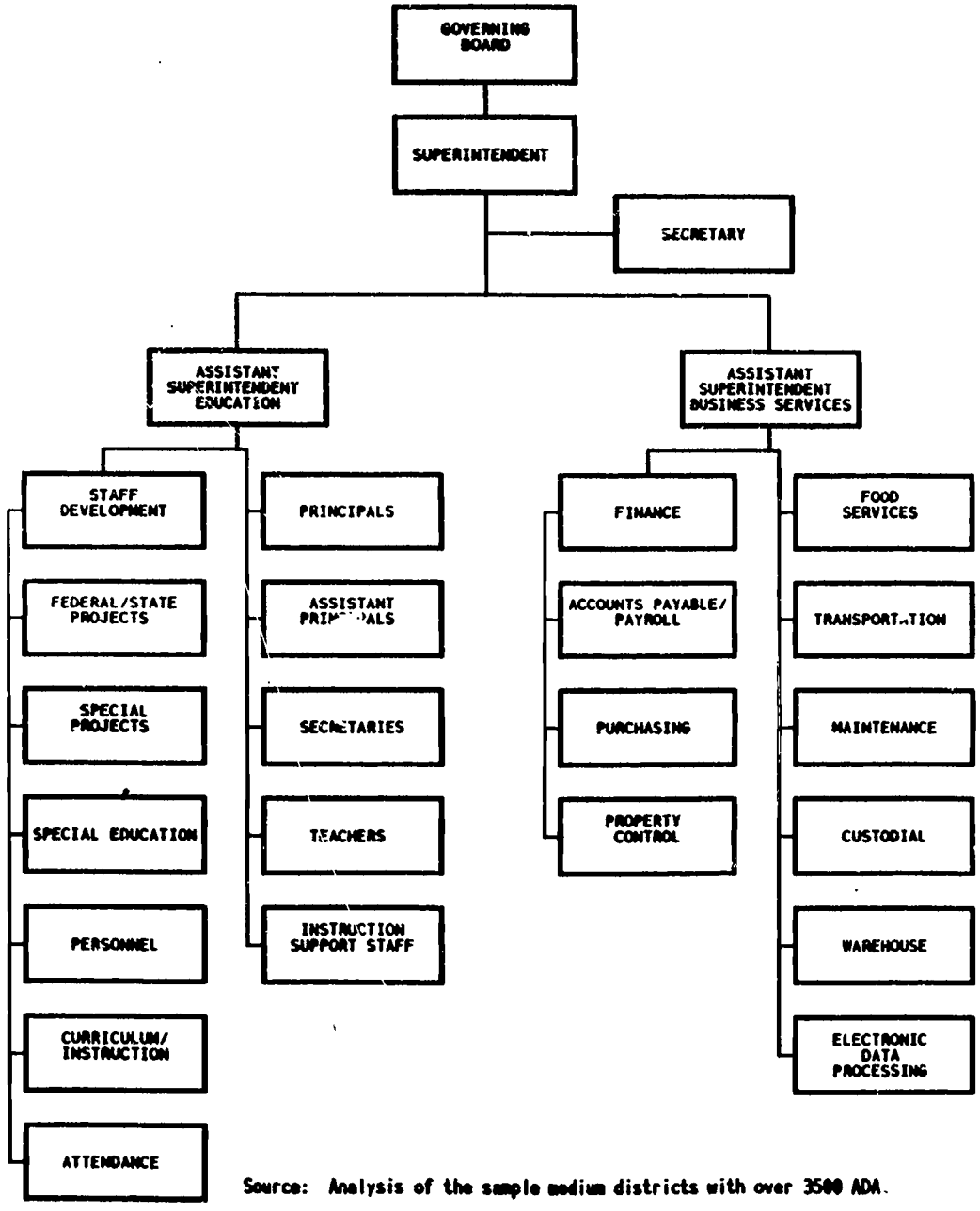
Source: Analysis of the sample small districts with 600 or more ADA.

APPENDIX E-3
SAMPLE ADMINISTRATIVE ORGANIZATIONAL STRUCTURE
MEDIUM DISTRICTS 3500 ADA OR LESS



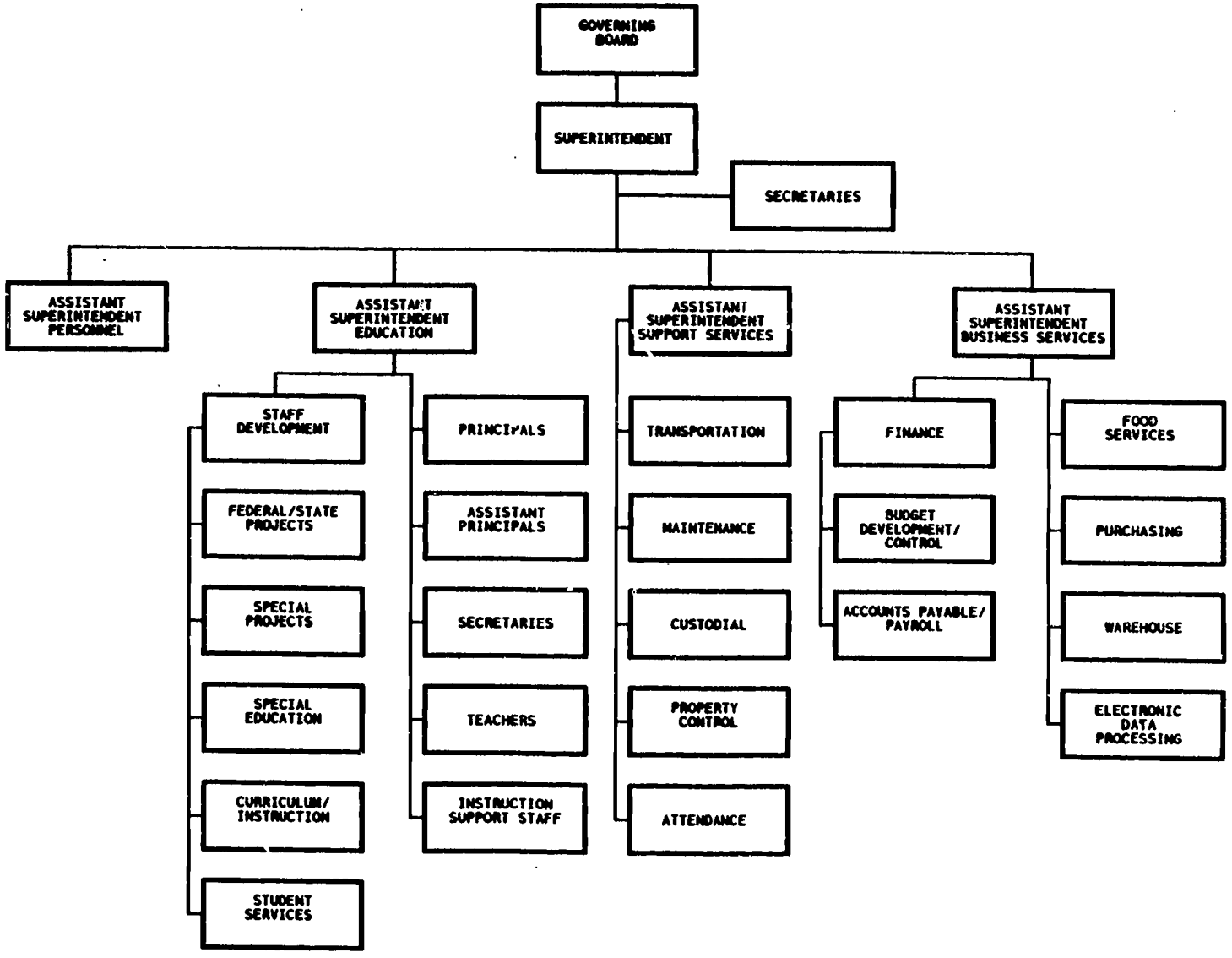
Source: Analysis of the sample medium districts with 3500 ADA or less.

APPENDIX E-4
SAMPLE ADMINISTRATIVE ORGANIZATIONAL STRUCTURE
MEDIUM DISTRICTS OVER 3500 ADA



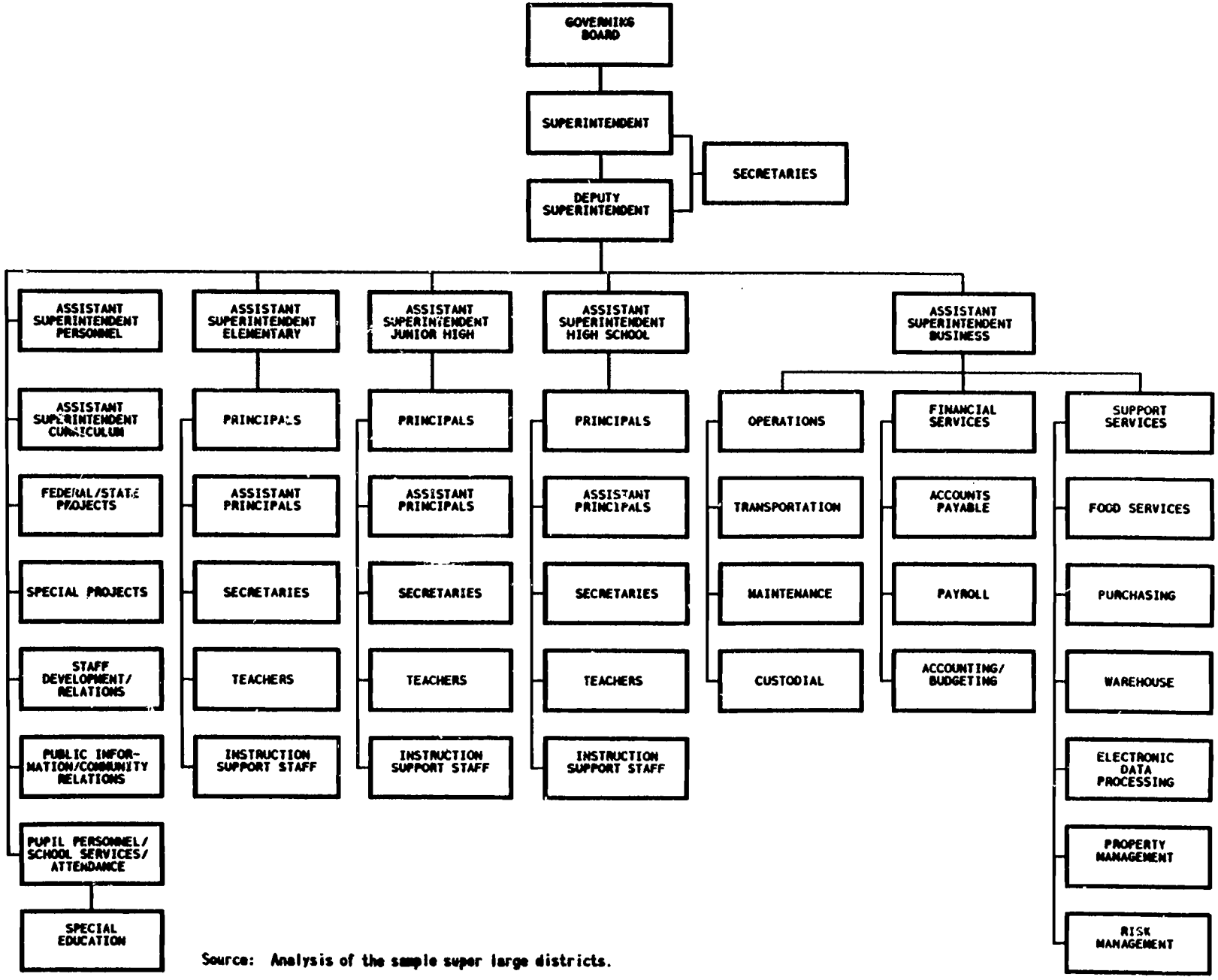
Source: Analysis of the sample medium districts with over 3500 ADA.

APPENDIX E-5
SAMPLE ADMINISTRATIVE ORGANIZATIONAL STRUCTURE OF LARGE DISTRICTS



Source: Analysis of the sample large districts.

APPENDIX E-6
SAMPLE ADMINISTRATIVE ORGANIZATIONAL STRUCTURE OF SUPER LARGE DISTRICTS



Source: Analysis of the sample super large districts.

APPENDIX F

SERVICES PROVIDED BY EDUCATION SERVICE AGENCIES

Individual Education Service Agencies (ESAs) in and among states provide the following services to different degrees, but may not provide all services listed.

Accounting - ESAs provide accountants for districts as an alternative to districts hiring accountants or purchasing time from an auditing firm. ESAs may also advise school districts in establishing and maintaining business office policies and procedures, apportioning state funds, and auditing records.

Adult Education - ESAs assist in the development, implementation, evaluation, and modification of adult education programs, and facilitate regional planning and cooperation among member districts, higher education, public and private agencies, and business.

Alternative School - ESAs run alternative schools for students unable to succeed or function in regular education classrooms.

Claims Tracking - ESAs obtain parental consent to bill private insurance and/or Medicaid for special education services (e.g., physical, occupational, and speech therapy; and audiology). ESAs retain a small portion of the money for administrative costs and forward the remainder to schools.

Cooperative Purchasing - ESAs provide volume purchasing of audio-visual and computer equipment; classroom, office, and janitorial supplies, transportation, furniture, and athletic equipment; lumber; and food. ESAs maintain warehouses and offer items throughout the year, or provide only cooperative bidding services, and purchase items that are delivered directly to the individual schools. Some ESAs provide a combination of the two services depending on the item purchased.

Coordination - ESA coordinators provide technical assistance to school personnel regarding the needs of handicapped children.

Curriculum - ESAs assist school districts in the development and implementation of curriculum to meet state requirements and student needs, including assistance in textbook selection, conducting a textbook fair, or coordinating various educational contests.

Data Processing - ESAs maintain a mainframe computer that school districts can access directly through terminals or use only periodically to compile or forward reports. ESA computer services may incorporate financial management (bookkeeping, report generation), personnel/payroll management (generating payroll and tax reports or storing and reporting personnel information), student management (class scheduling; recording attendance and test scores; special education reporting; and maintaining demographic/census, health, and transportation records), or other types of management.

Day Care - ESAs offer childcare centers, which are also used by area businesses. Some ESAs also offer a telephone database to provide families with information on licensed childcare homes and centers by area.

Deaf and Blind Education - State departments of education provide schools for the deaf and blind. Some states have been able to set up additional schools or otherwise provide more regionalized services for deaf and blind students, allowing students to acquire needed skills without having to leave their hometowns.

Direct Services - ESA speech clinicians, physical and occupational therapists, social workers, audiologists, teachers for the hearing or visually impaired, and psychologists work directly with students. Some ESAs maintain vans that travel among school districts and are fully equipped for certain types of services (e.g., audiometric vans). They also serve at-risk students.

Distance Learning - ESAs provide planning assistance (e.g., technical assistance, policy analysis, and administrative support) in developing distance learning programs.

Early Childhood Education - ESAs offer hearing and vision screening and developmental programs for preschool children. They also serve at-risk preschool children.

Equipment Repair - ESA technicians provide low-cost repair and maintenance for audio-visual equipment, computers, printers, and typewriters. They also offer annual maintenance contracts for certain types of equipment, typically typewriters and computers. Additionally, they offer school district personnel training in areas such as heating/cooling equipment monitoring or testing.

Food Services - ESAs operate a centralized kitchen, cooperatively purchase food, compile food service reports, and provide training and technical assistance in nutrition.

Gifted and Talented - ESAs provide various levels of technical assistance for gifted and talented students, including conducting needs assessment, establishing programs, and coordinating workshops.

Grant Program Management - ESAs apply for Federal and State grants for schools, process grant paperwork such as completion reports, and provide on-site and regional training and budgetary assistance in Federal and State grants management. This service also includes business/education partnerships in which ESAs help open doors to businesses and obtain grants and scholarships for students and teachers.

Health and Safety Management - ESA consultants provide technical assistance and compliance guidance in asbestos, lead and radon removal; employee right-to-know rules; underground fuel tanks; and other environmental safety issues as they arise. The service also includes the employment of or contracting with technicians to perform inspections, remove asbestos, or conduct other types of activities. In addition, ESAs provide instructors to teach safety education programs, such as farm or traffic safety, directly to students.

Insurance Pools - ESAs operate group health, life, property, and liability insurance pools. These pools may be used to acquire economies of scale in obtaining third-party coverage, for self-insurance purposes, or for a combination of self-insurance and third-party stop-loss coverage.

Liaison - ESAs maintain close contact with and serve as a liaison in relations among school districts and the state department of education, the legislature, private schools, higher education, and other state organizations and agencies as well as private enterprise.

Media Center - ESAs maintain media centers with library, print shop, or software duplication services as noted below.

> Media Library - ESAs maintain libraries of videotapes, videodisks, 16mm films, slides, loop films, cassette filmstrips, computer programs, and a variety of media equipment, including CAD/CAM equipment and CD-ROM players, which schools may borrow or rent for classroom use. Additional media items or programs may include instructional kits, robots, CPR training, delivery or pick-up services, and materials specifically designed for special education.
>
> Print Shop - ESAs maintain equipment to provide schools with customized reports, multipart forms, newsletters, stationery, brochures, and booklets. ESAs may offer page and graphic layout services to schools, or schools may send print-ready copy to an ESA print shop. Folding, collating, stapling, and low-cost copy services are also available.
>
> Software Duplication - ESAs provide duplication rights to software programs enabling school districts to copy programs.

Mobile Learning Centers - ESAs provide mobile units such as a planetarium or a classroom equipped with the latest health care technology.

Research and Planning - ESAs aid administrators and teachers in monitoring, collecting, and analyzing information about issues and trends impacting education, including conducting specific studies or research for schools.

Services to the State - ESAs provide services to the state department of education or its equivalent. These services include many of those listed in this appendix, in addition to collecting, editing, and transmitting data; issuing temporary teaching permits; and monitoring school accreditation.

Shared Staff - ESAs employ staff whose time is sold to or shared by member districts. Shared staff include nurses, counselors, psychologists, teachers, lawyers, and administrators, who may be shared through mobile learning centers, distance learning technology, or through travel among schools.

Special Programs - ESAs assist schools in providing educational programs for regular students or employ instructors to do the actual teaching. Special programs include driver education, drug abuse and AIDS prevention, and healthy living. These programs may be funded by Federal, state, or private grants.

Staff Development - ESAs plan, coordinate, and administer various inservice training workshops, seminars, conferences, and forums covering basic skills, regular and special education, and continuing professional education for teachers, office staff, or support staff (i.e., bus drivers, maintenance personnel, and food service workers). ESAs also maintain continuing education records for certified staff and a collection of professional development material to be shared among school districts.

State Requirements - ESAs assist school districts in establishing systems, policies, and procedures to comply with statutory, state department of education, and audit requirements. ESAs also assist school districts in preparing, validating, and disseminating state-required reports.

Teacher Applicant Pool - ESAs maintain teacher applications, transcripts, placement files, certificates, and resumes. Applicant information, such as personal data, education, teaching experience, references, and subject/level qualifications, is entered into a centralized computer system that can be accessed by districts.

Technology - ESAs provide leadership in developing and implementing technology for classroom instruction, staff development, and school management.

Test Bank - ESAs maintain a test bank designed to help educators build criterion-referenced tests. Test bank services also include local scoring for standardized tests, inservice on test interpretation, and coordinated sharing of test booklets.

Training - ESAs provide assistance, training, and consultation for teachers and district administrators on the integration of technology into the classroom. Training services include operating a preview center for reviewing hardware and software, and assistance with specific computer systems and programs.

Transportation - ESAs employ transportation coordinators to assist districts in establishing bus routes, interpreting and applying Federal and state regulations, maintaining equipment, training drivers, vehicle inspecting, financing, and developing or using computerized bus routing systems.

Unemployment Compensation - ESAs process claims, receive and disburse funds, provide training in unemployment compensation, and may manage an unemployment compensation trust.

Vocational Education - ESAs provide assistance related to vocational education, such as inservice training, summer workshops, developing/ evaluating credit courses, developing and maintaining media library collections, and consulting services.

Workers' Compensation - ESAs process claims, receive and disburse funds, and provide training in workers' compensation.

APPENDIX G

EXAMPLE STRUCTURES OF EDUCATION SERVICE AGENCIES

COLORADO

Colorado's Boards of Cooperative Services (BOCES) system is one of the least regulated Education Service Agency (ESA) systems that we encountered. During the 1960s, Colorado made four basic changes in the structure of its school system and the method by which districts receive various services. These changes included consolidating 1,034 school districts into 181, expanding all school districts to include grades K-12, eliminating the office of county school superintendent, and passing the Boards of Cooperative Services Act of 1965.

Formation - The BOCES Act enables two or more districts to cooperate in furnishing services authorized by law, if cooperation appears desirable.

Governance - BOCES members determine the size of their respective governing boards, after meeting the statutory requirement that each board must include no less than five members and at least one member from each participating district. BOCES have also established advisory councils consisting of administrators from each participating school district.

Services and Clientele - BOCES are not required to provide any particular service. Member districts determine the services to be provided by requesting and paying for them. Although some BOCES contract to provide services to other state and local educational agencies that are not member districts, the main purpose of BOCES is to provide services to their member school districts.

Membership - Although Colorado law allows for a fluid membership, in actuality membership has been steady. Districts may join or withdraw from BOCES with relative ease. BOCES agreements may be amended to admit one or more additional districts, community and technical colleges, junior colleges, or state-supported universities. It also appears that districts are free to

join other BOCES or to join more than one BOCES, although it is believed that this has not happened. Most BOCES member districts have small enrollments; however, 29 member districts have enrollments between 1,500 and 10,000 students, and six districts have enrollments over 10,000 students.

Funding - Colorado law limits the number of BOCES eligible for state funds to 17. Additionally, each BOCES must meet three legal criteria to be eligible for state funds. The BOCES must serve districts with a combined total enrollment of at least 4,000 students; they must serve districts in two or more counties; and they must serve districts with a combined total valuation for assessment of at least $60 million, or with a combined total area of at least 4,000 square miles. Each of the 17 BOCES meeting these requirements receives $10,000 annually from the state, and is eligible to receive additional state grants, if they are available. BOCES also receive Federal and private grants; however, the majority of funding comes from participating districts.

Colorado's form of an ESA has been successful. Between 1966 and 1977, 17 BOCES were formed to serve 159 of Colorado's 176 school districts, as well as member colleges and universities.

WASHINGTON

Like Colorado, Washington also consolidated school districts, eliminated the office of county school superintendent, and established Educational Service Districts (ESDs), starting in the 1960s. Washington's ESDs represent a typical system, which is a combination of the various approaches discussed in Chapter 6.

Formation - The Washington State Board of Education was granted the authority to determine the number and boundaries of ESDs. At the present time, there are nine ESDs in Washington, but there have been as many as 14.

Governance - As prescribed by law, each ESD is governed by a board of seven or nine members, each representing a subdivision of an ESD region called a

director district. Director districts are necessary because of the large number of local school districts in each ESD. The governing boards of local districts elect a representative from their respective director district to serve on the ESD board.

ESDs also have advisory boards and committees consisting of the superintendents from each member school district. The advisory board may be responsible for approving budgets, forming cooperative services, as well as offering counsel on services, programming, and problem solving. The superintendent of public instruction approves and monitors ESD budgets.

Services and Clientele - ESDs are required by law to provide certain services called "core" services to school districts, and to assist the Washington State Superintendent of Public Instruction and the State Board of Education in the performance of their respective duties. Core services are provided in the areas of administration, finance, curriculum development, and certification, and include advising school districts on establishing and maintaining business office policies and procedures; assisting districts in preparing, validating, and disseminating reports and data required by the state board of education/superintendent of public instruction; providing budgetary and technical assistance; and assisting in grant application. In addition, ESDs are authorized to develop and operate other cooperative programs that local districts want.

Membership - Public schools are required to be members of their regional ESD and use the core services it provides. The use of other cooperative services is voluntary. In addition to serving public school districts, ESDs may also provide services to and work in conjunction with private schools, community colleges and universities, the state schools for the deaf and blind, and other community service agencies.

Funding - ESDs receive appropriations from the legislature to fund the required core services they provide, based on a core services funding formula. The appropriated amount received by each ESD is substantially larger than that received by BOCES in Colorado; however, the amount is only 5-10 percent of each ESD's total budget. This appropriation is a stable

source of revenue for ESDs and has provided the basic foundation from which they have been able to expand the services they provide. ESDs also receive grants from the Federal and state governments. However, the main source of funding for ESDs is user charges from member school districts for the noncore cooperative services they use.

Washington's structure has also been successful, and its ESDs have become an integral part of the state's educational system. They have demonstrated an ability to provide cost-effective services to both local school districts and the state, and have been instrumental in the expansion of services offered to schools statewide.

BIBLIOGRAPHY

Administrative Science Quarterly. "Centralization, Fragmentation, and School District Complexity." Administrative Science Quarterly, Vol. 32, No. 2. June 1987.

Arizona Department of Education. Annual Report of the Superintendent of Public Instruction: Statistical and Financial Data (1981-82 through 1989-90). 1982-1990.

____. Appendix to the Statewide Report for Arizona Pupil Achievement Testing. June 1990.

____. "Common Core of Data Part I, School Year 1989-90." Report No. CCDE 14-1. 12 Nov. 1991.

____. "FTE and Employee Count by Main and Second Position, School Year 1989-1990." Report No. SDER30-5. 8 Nov. 1991.

____. "Resident Average Daily Membership Recap, School Year 1989-90." Report No. 4002. Dec. 1990.

____. TIEDS (Technology Integrated Educational Delivery System) A K-12 Master Plan for the Infusion of Technology in Arizona Schools in the Teaching/Learning Environment. July 1990.

Arizona Office of the Auditor General Telephone Interview with Melanie Marsh, Public Affairs, Health Insurance Association of America, 6 Feb. 1992, RE: Data published by U.S. Bureau of Labor Statistics concerning medical insurance premium cost increases for employers during 1980-1990.

Ashton, Art. "Arizona." Reports from Western States - Educational Telecommunications Plans, Policies, Programs. Oct. 1991.

Bridgman, Anne. "Blowing Away the Blob: The Facts Debunk a Persistent Myth About School Management." The Executive Educator. Sept. 1987.

California Association of County Superintendents of Schools. Holmes Commission on County Office of Education Services. Basic Menu of Services Provided by California County Offices of Education and California Educational Service Regions. June 1990.

____. Partners in Educational Excellence. Pamphlet.

Colorado BOCES Association, Inc. Boards of Cooperative Services. 1991.

Colorado Statutes. Article 5: "Boards of Cooperative Services Act of 1965."

Cooper, Shirley, and Charles O. Fitzwater. County School Administration. New York: Harper & Brothers, 1954.

Cooperative Educational Service Agency #1 (Wisconsin). 1990-91 Annual Report.

____. 1991-92 Directory of Services and School Districts.

____. Providing Cooperative Solutions for Quality Education. Nov. 1991.

Cooperative Educational Service Agency #3 (Wisconsin). Annual Report. August 1991.

____. 1990-91 Programs & Services.

Dennis, Dale M. Memo to Special Committee on Assessment and Taxation, 17 Oct. 1991. Kansas State Board of Education. Division of Fiscal Services and Quality Control.

Educational Cooperative Service Units (Minnesota). Laws Relating to Education in Minnesota. 1990.

Educational Research Service. "Fringe Benefits for Administrators in Public Schools, 1989-90." National Survey of Salaries and Wages in Public Schools, Part 2, ERS Report. Washington, D.C., 1990.

____. "Measuring Changes in Salaries and Wages in Public Schools: 1990 Edition." ERS School Management Reference Series. Washington, D.C., 1990.

____. "Salaries Paid Professional Personnel in Public Schools." National Survey of Salaries and Wages in Public Schools, Part 2, ERS Report. Washington, D.C., 1984-85 through 1990-91.

____. "Size of Schools and School Districts." ERS Information Aid No. 8. Washington, D.C., June 1971.

Educational Service District #101 (Washington). 1991 Directory.

____. 1989-90 Report on Cost Avoidance and Cost Effectiveness.

____. Presenting the School in the Sky.

Educational Service District #112 (Washington). Services Matrix. Sept. 1991.

Fowler, William J., Jr. Financial Accounting for Local and State Systems 1990. U.S. Department of Education. Office of Educational Research and Improvement. Washington, D.C.: GPO, July 1990.

Gardner, Gene Letter to Representative Beverly Hermon, 11 March 1991, RE: Correction of numbers of administrators and staffs for Arizona in the Digest of Education Statistics. Arizona Department of Education.

Genesee Intermediate School District (Michigan). 1990-91 Local District User Index.

Guthrie, James W., Walter I. Garms, and Lawrence C. Pierce. School Finance and Education Policy: Enhancing Educational Efficiency, Equality, and Choice. 2nd ed. Englewood Cliffs, N.J.: Prentice Hall, 1988.

Hawks, Gary D. Memo to the Michigan State Board of Education, 22 Nov. 1991.

Kansas Statutes Annotated §§12-2901 et seq. and 72-8230 et seq.

KPMG Peat Marwick (for Region IV Education Service Center of Texas). Comparison of Data Processing Services. July 1991.

Lotus Development Corporation. 1-2-3 Reference Manual, Release 2.01. 1986.

Michigan Association of Intermediate School Administrators. Michigan's Intermediate School Districts: Mission Role and Essential Services. April 1990.

Michigan Governor's Telecommunication Task Force. Connections - A Strategy for Michigan's Future Through Telecommunications. May 1990.

Michigan State Board of Education. Inventory of Instructional Telecommunications Systems in Michigan. Nov. 1991.

Minnesota Educational Cooperative Service Units. 1990-91 Minnesota Educational Cooperative Service Units Information Handbook. Jan. 1991.

North East Florida Educational Consortium. 1989-90 Annual Report.

_____. Directory of Services.

Northeast Educational Services Cooperative (South Dakota). Bylaws.

_____. 1991-92 Member School District Information Pamphlet.

Northwest Georgia Regional Educational Service Agency. 1991-92 Service Directory.

Northern Colorado Board of Cooperative Educational Services. Northern Colorado Board of Cooperative Educational Services Guide.

Placer County Office of Education (California). Basic Menu of Services. April 1991.

____. Providing Support. Pamphlet.

Regional Educational Service Agencies (Georgia). Annual Report. Nov. 1989.

Robinson, Glen. "Some Popular Assertions About School Administration: Are They Myths or Realities?" Concerns in Education. Educational Research Service, May 1988.

Robinson, Glen E., and Melinda H. Brown. "Salaries for School Business Officials, 1990-1991." School Business Affairs, Vol. 57, No. 8, Aug. 1991.

San Luis Valley Board of Cooperative Services (Colorado). Mission Statement, San Luis Valley Board of Cooperative Services. Aug. 1991.

South Dakota Codified Laws §§13-5-33, 13-37-14.2, and 13-39-53.

South Dakota Governor Mickelson's Telecommunications Task Force. Rural Development Telecommunications Network for the State of South Dakota. Oct. 1991.

Southeast Kansas Education Service Center. Southeast Kansas Education Service Center Manual. Oct. 1991.

Southwest/West Central Educational Cocperative Service Unit (Minnesota). 1990-91 Annual Report. Aug. 1991.

____. 1991-92 Annual Plan. May 1991.

____. Bylaws. May 1976.

____. 1990-91 Cost Savings Analysis.

Stephens Associates. Education Service Agencies: Status and Trends. ESA Study Series: Report No. I. June 1978.

Stephens, E. Robert, and Walter G. Turner. Approaching the Next Millenium: Educational Service Agencies in the 1990s. ESA Study Series: Report No. II. Arlington, Virginia: American Association of Educational Service Agencies and American Association of School Administrators, 1991.

Telecommunications International. Arizona Education Telecommunications Cooperative - Report for a Statewide Network. Jan. 1990.

Texas Performance Review, July 1991.

BIBLIOGRAPHY (Concl'd)

Texas State Board of Education. Texas Education Agency. Biennial Report on Regional Education Service Centers. April 1991.

Thomas, Alfred Jr. Public Education in Territorial Arizona 1864-1912. Arizona State College at Tempe, 1952.

U.S. Department of Commerce. Bureau of the Census. Statistical Abstract of the United States, 1991. 111th ed. Washington, D.C.: GPO, 1991.

U.S. Department of Education. National Center for Education Statistics. "Public Elementary and Secondary Education Schools and Agencies in the United States and Outlying Areas: School Year 1989-90." Common Core of Data. Washington, D.C.: GPO, April 1991.

___. Digest of Education Statistics 1990. Washington, D.C.: GPO, Feb. 1991.

___. Digest of Education Statistics 1991. Washington, D.C.: GPO, Nov. 1991.

___. Instructions for Completing the Nonfiscal Surveys of the Common Core of Data, School Year 1989-1990 and 1991-1992. Washington, D.C.: GPO.

___. (as prepared by Arizona, California, Florida, Georgia, Missouri, Nevada, Texas, Utah, and Washington.) The National Public Education Financial Survey, Fiscal Year 1990. Washington, D.C.: GPO, 31 Dec. 1991.

Walonick, David S. StatPac Gold - Statistical Analysis Package for the IBM. Walonick Associates, Inc., 1981-1988.

Washington State Department of Public Instruction. Organization and Financing of the Washington Public School System. Jan. 1990.

Wasson, David. Special Report to the Arizona Auditor General's Office. Arizona: Mohave Educational Services Cooperative, 27 Dec. 1991.